

Integrated Resource Plan

Appendix 7G

First Nations Consultation Report 2012

BC Hydro Integrated Resource Plan

First Nations Consultation Report

September 26, 2012



EXECUTIVE SUMMARY

Introduction

The Integrated Resource Plan will set out how BC Hydro proposes to meet future growth in electricity demand over the next 20 years. In developing the Integrated Resource Plan, BC Hydro has been consulting with First Nations around the province.

This Consultation Report is a factual report that outlines BC Hydro's approach to consultation, documents the information BC Hydro has provided to First Nations on the development of the Integrated Resource Plan, and summarizes the input and feedback BC Hydro has heard from First Nations to date. The Consultation Report will assist BC Hydro in finalizing the Integrated Resource Plan, and will be provided to First Nations and to the Province of British Columbia.

Background

British Columbia's 2010 *Clean Energy Act* requires BC Hydro to develop an Integrated Resource Plan for submission to the Minister of Energy for government approval. After the *Clean Energy Act* came into force, an amendment to the legislation extended the time period for submission of the first Integrated Resource Plan to government from 18 months (December 2011) to 30 months (December 2012).

BC Hydro's Integrated Resource Plan is a province-wide 20-year plan that describes how BC Hydro plans to meet future growth in demand for electricity. Underpinning this plan is BC Hydro's long-standing electricity planning objective to ensure a reliable, cost-effective electricity supply, and B.C.'s *Clean Energy Act*, including, among other things, requirements related to clean energy, greenhouse gas reduction and achieving electricity self-sufficiency.

The Integrated Resource Plan describes the actions BC Hydro recommends to meet growing demand so that BC Hydro customers will continue to receive

affordable, clean and reliable electricity. The draft Integrated Resource Plan was developed considering input gathered in 2011 from First Nations, stakeholder and public consultation along with technical, financial, environmental, and economic development inputs. While specific projects are identified among the draft recommended actions, the Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements. In addition, BC Hydro will continue to ensure that consultation has been adequate and reasonable prior to signing energy procurement agreements with independent power producers.

Consultation Process

BC Hydro's consultation on the Integrated Resource Plan involves three distinct streams: a First Nations consultation stream; a technical stream; and a public and stakeholder stream. In all three consultation streams, BC Hydro sought input into the development of a draft Integrated Resource Plan, as well as feedback on the completed draft of Integrated Resource Plan, issued in May 2012. The input and feedback from all three consultation streams will be considered by BC Hydro in developing the Integrated Resource Plan that will be submitted to Government.

BC Hydro invited BC's First Nations, Tribal Councils, and First Nations Organizations to participate in the development of the Integrated Resource Plan through a province-wide consultation process. BC Hydro also invited the BC First Nations Energy and Mining Council (BCFNEMC) to participate in the consultation on the development of the Integrated Resource Plan. The BCFNEMC has been formally mandated to guide the BC First Nations Energy Action Plan (2007) by the following three First Nations provincial political organizations: the Union of BC Indian Chiefs, the BC Assembly of First Nations, and the First Nations Summit.

The First Nations consultation stream involved two rounds of regional workshops in March 2011 and June/July 2012, respectively, with participant funding and reimbursement of travel expenses offered to First Nations participants in these workshops. There was also an opportunity for First Nations to provide written comments following both rounds of workshops. BC Hydro also invited First Nations to participate in the public and stakeholder consultation stream. In addition, BC Hydro has provided capacity funding for the BCFNEMC to participate in both the regional workshops and the Technical Advisory Committee, which is part of the technical consultation stream.

Consultation Activities to Date

Between January and April 2011, BC Hydro's consultation activities on the Integrated Resource Plan were focused on sharing information on the planning process and receiving input from B.C. First Nations into the development of the draft Integrated Resource Plan, centred around six planning topics. From May 2012, when the draft was first made available, until August 2012, the focus of BC Hydro's consultation activities has been again to share information on the planning process, including important updates since 2011, as well as to seek First Nations' feedback on the draft recommended actions before the Integrated Resource Plan is submitted to government for approval.

All B.C.-based First Nations were notified by BC Hydro about the development of the Integrated Resource Plan. There were opportunities to provide input into the development of and to provide feedback on a draft Integrated Resource Plan at two rounds of regional workshops in March 2011 and June/July 2012. The workshop "pre-reading" material enclosed with the notification letters was provided to First Nations to enable more informed discussion at the regional workshops, as per input and advice received from First Nations during a consultation design workshop in September 2010.

Between March 2 and 21, 2011, BC Hydro hosted nine one-day workshops in regional locations around the province, attended by 121 participants representing 78 First Nations, Tribal Councils, and First Nations Organizations, including the BCFNEMC. Between June 26 and July 13, 2012, BC Hydro hosted eight one-day workshops in the same regional locations (except Castlegar), attended by 117 participants representing 69 First Nations, Tribal Councils, and First Nations Organizations, including the BCFNEMC.

BC Hydro prepared summaries of the input and feedback received from First Nations participants at each of the regional workshops. The summaries were distributed to participants and their respective First Nations, Tribal Councils, and First Nations Organizations, as well as posted on the First Nations page of the Integrated Resource Plan website (www.bchydro.com/irp).

After each workshop, BC Hydro emailed the workshop participants an electronic version of a form seeking their written comments. In 2011, the “First Nations Input Form” asked specific questions about the six planning topics. In 2012, the “First Nations Feedback Form” asked respondents to indicate a level of agreement with each draft recommended action and the reason for the indicated level of agreement. Options for level of agreement were; strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree. Of 117 participants in the 2012 regional workshops, BC Hydro received 26 First Nations Feedback Forms.

BC Hydro also received letters and e-mails from First Nations during the written comment period following the 2011 and 2012 workshops, as well as four separate reports prepared by the BCFNEMC, two of which relate to their involvement in the two rounds of First Nations regional workshops, and the other two relating to their involvement in the Technical Advisory Committee.

First Nations Input and Feedback

At regional workshops and through subsequent written comments, First Nations provided input into the development of the draft Integrated Resource Plan in 2011 and feedback on the Draft Integrated Resource Plan in 2012.

The remainder of this Executive Summary provides a high-level overview of the verbal feedback expressed by participants in the 2012 workshops and the level of agreement indicated in received First Nations Feedback Forms on the draft recommended actions. This summary is organized according to the four sets of draft recommended actions: (1) Conserve More, (2) Build and Re-invest More in Existing Assets, (3) Buy More Made-in-BC Power; and (4) Prepare for Potentially Greater Demand. A high-level overview of additional feedback not specific to the recommended actions is also provided.

Feedback on Conserve More

The First Nations Feedback Forms mostly indicated some level or a strong level of agreement with **Recommended Actions 1a, 1b, and 2** comprising the “Conserve More” set. Workshop feedback on the recommended actions relating to conservation was also largely supportive, with many participants expressing an interest in learning more about how to effectively monitor and modify consumption and about the programs that BC Hydro has in place to help First Nations offset some of the costs of these efforts.

There was concern among some participants that BC Hydro was not going far enough with conservation from a sustainability perspective.

Recommendations included more education to support informed conservation efforts, as well as specific suggestions to help reduce demand and electricity costs, such as time-of-use rates, “peer pressure” tactics, free in-home consumption tracking devices, and outreach to homeowners of inefficient rental properties.

Feedback on Build and Reinvest More in Existing Assets

First Nations Feedback Forms indicated more disagreement than agreement with **Recommended Action 3** on Site C where respondents expressed a clear opinion on their level of agreement with this draft recommended action. However, most respondents did not provide an opinion for this recommended action, which received the highest number of “neither agree nor disagree” responses among all recommended actions.

Similar feedback was received during the workshops. First Nations in most regions were reluctant to express their own views in relation to Site C, and generally stated that they supported whatever position First Nations local to the proposed Site C area took in relation to Site C. First Nations workshop participants local to the proposed Site C area expressed significant opposition to Site C. There was also a perception among some participants that BC Hydro considered Site C a “done deal”. It was suggested that there was a bias in favour of developing Site C because of what was viewed as a long-standing government policy of maximizing the hydroelectric potential of the Peace and Columbia rivers, and the prioritization of economic values over other values. There was a view that these drivers have now left BC Hydro with a lack of alternatives to Site C, and that the recommended action to proceed with Site C makes no effort to address, or is even dismissive of, values that cannot be measured using only economic indicators.

Among the First Nations Feedback Form respondents providing a clear opinion, more agreed than disagreed with **Recommended Action 4** pertaining to Revelstoke 6. However, taken together, the number of respondents who neither agreed nor disagreed, somewhat disagreed, or provided no answer was equal to the number that indicated agreement. Some workshop participants expressed disagreement with BC Hydro’s characterization of the installation of a sixth generating unit at the Revelstoke powerhouse (i.e., Revelstoke 6) as having no or minimal environmental impact, and indicated that they were reluctant to

provide feedback without more information on the potential impacts of Revelstoke 6. There was also concern regarding the exemption of Revelstoke 6 from the British Columbia Utilities Commission process.

Several workshop participants expressed that, while they were being told that Site C and Revelstoke 6 were not yet confirmed and that their views on them as recommended actions were being sought, there was a perception that the Integrated Resource Plan had an undue reliance on Site C and Revelstoke 6, which made them appear as inevitable, irrespective of feedback.

While there were no specific comments received during the workshops on the draft **Recommended Action 5** relating to additional Resource Smart opportunities, First Nations Feedback Forms indicated a high level of agreement with this recommended action, although it also received the highest number of non-responses (no answer) among the “Build and Reinvest More” set of recommended actions.

For **Recommended Action 6** on market purchases, the Columbia River Entitlement, and Burrard Thermal, the First Nations Feedback Forms indicated that there were the same number of respondents that agreed with this recommended action as there were respondents that neither agreed nor disagreed, somewhat disagreed, or provided no answer. Limited feedback was received during the workshops on this recommended action and the feedback that was received was mixed. One workshop participant expressed support for using the Columbia Treaty Entitlement as a short-term solution given the lack of available short-term capacity options, while another participant expressed concern about relying on the treaty when the United States was decommissioning dams on the Columbia, and that such reliance might expose BC Hydro to potentially higher global market prices.

First Nations Feedback Forms indicated that the number of respondents who neither agreed nor disagreed, somewhat or strongly disagreed, or provided no

answer outnumbered those that agreed with draft **Recommended Action 7** pertaining to transmission upgrades. Similar to concerns expressed in relation to Site C and Revelstoke 6, some workshop participants voiced the view that the transmission upgrades appeared to be fully committed projects, even though participants were being told that the Integrated Resource Plan did not commit BC Hydro to any specific capital project. Several workshop participants also stated that industrial customers should bear the costs of the transmission upgrades, given that they appeared to be specifically for the purpose of industrial development in the North and that rates for consumers were already high enough.

Feedback on Buy More Made-in-BC Power

A significant number of First Nations Feedback Forms indicated agreement with draft **Recommended Action 8** relating to developing energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers. A small but equal number either somewhat disagreed or neither disagreed nor agreed

Workshop participants expressed substantial interest in greater First Nations involvement in clean or renewable energy production but identified significant barriers to greater involvement. Among these barriers was a lack of technical and/or financial capacity to effectively participate or compete in power calls. There was also significant concern on the part of some participants that there was a lack of transmission system capacity on northern Vancouver Island to take on more interconnections from independent power projects.

Participants felt strongly that BC Hydro should be doing more to help First Nations overcome these barriers. Recommendations included involving First Nations earlier in a power call process, providing more information on how BC Hydro's procurement process works, finding ways to help First Nations finance

projects and establishing First Nations procurement targets or rights of first refusal on procurement opportunities in their region.

Workshop feedback also identified a preference for the generation of power close to the consumption of that power, rather than its transmission to or from other regions. It was suggested that independent power projects that are designed to supply power locally should be evaluated differently than those that are designed to export power to other regions of the province, such as the Lower Mainland. There was also interest in the types of resource options BC Hydro would consider in an energy procurement process.

Feedback on Prepare for Potentially Greater Demand

On the whole for this set of recommended actions on “Prepare for Potentially Greater Demand,” the First Nations Feedback Forms indicated higher levels of agreement than disagreement where a clear opinion was provided. However, the levels of disagreement within this set were relatively high compared to other sets of recommended actions, and taken together with the number of “neither agree nor disagree” responses or non-responses (no answer), clear agreement was limited.

Workshop feedback provided on this set of draft recommended actions was also mixed. Several workshop participants expressed concern about the uncertainty associated with this set of draft recommended actions, and the inability of First Nations to consider and comment, on what might affect them in the future without what they felt was enough information on, or understanding of, the recommended actions and their potential impacts. Several workshop participants indicated that silence from First Nations did not mean consent.

With regard to **Recommended Action 9a** relating to a new transmission line from Prince George to Terrace and Kitimat, there were specific concerns raised in the workshops about the environmental and health impacts of a new high voltage line and about BC Hydro subsidizing the extension of the grid to serve

the liquefied natural gas (LNG) industry. Some participants favoured the LNG industry producing its own electricity with natural gas. Other participants were opposed to the use of natural gas for this purpose. There were also several expressions of both concern with and interest in the government's recent announcement to exempt natural gas under the *Clean Energy Act* when used by the LNG industry to self-supply. First Nations Feedback Forms indicated more agreement than disagreement among those providing a clear opinion, but the number of those who agreed was equal to the total number of those who neither agreed nor disagreed, disagreed, or provided no answer.

With regard to draft **Recommended Action 9b** relating to the additional procurement of clean energy backed up by natural gas, there was an interest in future BC Hydro energy procurement, as well as in how BC Hydro planned to approach procurement with First Nations specifically. Some participants expressed significant concern about a perceived lack of opportunities for First Nations in clean/renewable energy development among the recommended actions, and it was suggested that BC Hydro and First Nations should look at a "new relationship" in the acquisition of power. There was also a concern that the call for power identified among this set of recommended actions would only be needed to serve prospective LNG development, as there was a desire among some First Nations to develop clean energy for the province in general, not just for LNG. The First Nations Feedback Forms indicate that, among respondents providing a clear opinion on this recommended action, most are in agreement. However, the total number of respondents neither agreeing nor disagreeing, disagreeing, or providing no answer outnumbered those who agreed.

For draft **Recommended Action 10** relating to continued monitoring of the Northeast natural gas industry, workshop participants expressed the view that it would make more sense for this industry to use the gas for power rather than electricity. However, the extraction of the gas by fracking was characterized as a big environmental issue by some participants, and those participants did not

consider natural gas sustainable or renewable. First Nations Feedback Forms indicate that the number of responses showing some level of agreement with this recommended action was the highest among response categories, but the total number of respondents neither agreeing nor disagreeing, disagreeing, or providing no answer was higher than those showing some level of agreement.

The views of workshop participants on draft **Recommended Action 11a** to work with industry to explore pumped storage capacity options ranged from unfavourable to favourable. While one participant described the technology as “frightening” and another viewed it as high cost with a low return, there was also the suggestion that BC Hydro work with First Nations to establish pumped storage as a new First Nations industry. Among the First Nations Feedback Form respondents, this recommended action received the highest level of agreement among those for this set of recommended actions, with a third of respondents neither agreeing, disagreeing, or providing no answer.

A range of views were offered on draft **Recommended Action 11b** to work with industry to explore natural gas fired generation options. Opposition to natural gas heard during the workshops stemmed from the view that it was not sustainable or as cheap as some clean/renewable resources once the cost of cleaning up emissions was taken into account. There was also a concern about the health effects of these emissions. On the other hand, support for natural gas was tied to the expectation that the costs would be borne by industry and that the facilities could be situated close to the where the electricity is consumed. There was also the view that it was inconsistent to try to minimize the domestic use of gas as a power source while at the same time exporting it for non-domestic use, as the emissions were all going into the same atmosphere. First Nations Feedback Forms showed that the level of agreement with this recommended action, while outnumbering other response categories, was slightly outnumbered by the total number of responses that neither agreed nor disagreed, disagreed, or provided no answer. In addition, this recommended action received the

highest level of disagreement among the recommended actions in the “Prepare for Potentially Greater Demand” set.

Additional Feedback

In addition to feedback on the draft recommended actions, participants at the workshops also provided feedback that was not specific to those actions, but related in a more general way to the Integrated Resource Plan, particularly in terms of approach and assumptions. The key themes of additional feedback revolved around concerns with the following:

- the process of consultation on the Integrated Resource Plan, with the majority of this feedback indicating that participants did not feel as though BC Hydro’s methods and timelines for gathering feedback were adequate;
- a lack of internal capacity within First Nations to review, understand, and provide informed comment on a voluminous and technical draft Integrated Resource Plan;
- the perceived issues arising from using a province-wide planning approach, which is considered a top-down approach, rather than planning that uses a regional perspective or proceeds on the basis of First Nations territories (e.g. First Nations have no ability to comment on draft actions that may adversely affect other First Nations’ territories, and BC Hydro has no ability to consider Aboriginal and treaty rights, past grievances, revenue sharing);
- increased opportunities/benefits to First Nations;
- inadequate and/or out-dated electricity service to many remote First Nations communities, even those connected to the electricity grid; and
- recommendations to BC Hydro to consider in its planning the interconnectedness of everything, the importance of how what First Nations say to BC Hydro is important to First Nations’ survival, and how BC Hydro can

improve its relationship with First Nations, both in the big picture and in the day to day.

Table of Contents

EXECUTIVE SUMMARY	i-xiv
1 INTRODUCTION	1
2 BACKGROUND	1
3 CONSULTATION PROCESS.....	2
3.1 Identification of First Nations	3
3.2 BC Hydro's Approach to First Nations Consultation.....	3
3.3 Objectives of Consultation.....	4
3.4 Development of Consultation Approach.....	5
3.5 First Nations Involvement in the Public and Stakeholder Stream	6
3.6 First Nations Involvement in the Technical Consultation Stream	7
3.7 First Nations Consultation Stream.....	8
3.7.1 Information Sharing and Communications	10
3.7.2 Participant and Travel Funding for First Nations, Tribal Councils, and First Nations Organizations.....	10
4 CONSULTATION ACTIVITIES TO DATE.....	10
4.1 Regional Workshop Invitation and Pre-reading.....	11
4.2 Regional Workshops	12
4.2.1 First Nations Participation in the Regional Workshops	14
4.2.2 Information Provided at Regional Workshops	17
4.2.3 Summaries of Input and Feedback from Regional Workshops	18
4.3 First Nations Written Input and Feedback	19
4.4 Role of BC First Nations Energy and Mining Council.....	19
4.4.1 Capacity Funding	20
4.4.2 Involvement in Regional Workshops	20
5 FIRST NATIONS INPUT AND FEEDBACK.....	22
5.1 Summary of First Nations Input from 2011 into Development of the Draft Integrated Resource Plan.....	22
5.1.1 Input on Conservation and Efficiency.....	23

5.1.2	Input on Electricity Generation Options.....	23
5.1.3	Input on Electrification	25
5.1.4	Input on Transmission Planning.....	25
5.1.5	Input on Export Market Potential.....	26
5.1.6	Input on Clean or Renewable Energy Development	26
5.1.7	Input on Consultation Process	27
5.2	Summary of First Nations Feedback from 2012 on the Draft Integrated Resource Plan	28
5.2.1	2012 First Nations Regional Workshops	29
5.2.1.1	Conserve More	30
5.2.1.1.1	Comments and Recommendations – Conserve More	30
5.2.1.2	Build and Reinvest More in Existing Assets	32
5.2.1.2.1	Comments & Recommendations — Build and Reinvest More.....	34
5.2.1.3	Buy More Made-in-BC Power.....	37
5.2.1.3.1	Comments & Recommendations — Buy More Made-in-BC Power	38
5.2.1.4	Prepare for Potentially Greater Demand.....	40
5.2.1.4.1	Comments & Recommendations — Prepare for Potentially Greater Demand	42
5.2.1.5	Additional Feedback	45
5.2.1.5.1	Comments & Recommendations — Additional Feedback	46
5.2.1.6	Attributed Comments.....	53
5.2.2	Written Input and Feedback from First Nations.....	54
5.2.2.1	2012 First Nations Feedback Forms	54
5.2.2.1.1	Conserve More	54
5.2.2.1.2	Build and Reinvest More in Existing Assets	62
5.2.2.1.3	Buy More Made-in-BC Power.....	72
5.2.2.1.4	Prepare for Potentially Greater Demand	74
5.2.2.1.5	Additional Feedback	84
5.2.2.2	Additional Written Feedback from First Nations	86
5.2.3	BC First Nations Energy and Mining Council Feedback	86
5.2.3.1	BCFNEMC Regional Workshop Comments and Recommendations.....	87
5.2.3.1.1	Conserve More	87
5.2.3.1.2	Build and Reinvest More in Existing Assets	88

5.2.3.1.3 Buy More Made-in-BC Power..... 90

5.2.3.1.4 Prepare for Potentially Greater Demand 90

5.2.3.1.5 Additional Feedback from the BCFNEMC..... 92

5.2.3.2 BCFNEMC Technical Advisory Committee Comments and Recommendations 98

5.2.3.2.1 Conserve More 98

5.2.3.2.2 Build and Reinvest More in Existing Assets 100

5.2.3.2.3 Buy More Made-in-BC Power..... 102

5.2.3.2.4 Prepare for Potentially Greater Demand 102

5.2.3.2.5 Additional Feedback from the BCFNEMC..... 104

List of Appendices

- Appendix 1 — Letter from Ministry of Energy and Mines
- Appendix 2 — BC Hydro Letter to Ministry of Energy and Mines
- Appendix 3 — Summary of Input and Advice Received on BC Hydro's Proposed Approach to Province-Wide First Nations Consultation
- Appendix 4 — Lists of First Nations, Tribal Councils & First Nations Organizations Notified
- Appendix 5 — Notification Letters & Information Packages
- Appendix 6 — Workshop Registrant & Participation Lists
- Appendix 7 — Workshop Agendas
- Appendix 8 — Workshop Presentations
- Appendix 9 — 2011 First Nations Input Form & 2012 Feedback Form
- Appendix 10 — 2011 Consultation Workbook & 2012 Discussion Guide
- Appendix 11 — 2011 Workshop Summaries of Input
- Appendix 12 — 2012 Workshop Summaries of Feedback
- Appendix 13 — Distribution Letters for Workshop Summaries
- Appendix 14 — Workshop Follow-up Letters
- Appendix 15 — B.C. First Nations Energy and Mining Council Capacity Funding Agreement
- Appendix 16 — B.C. First Nations Energy and Mining Council Workshop Reports
- Appendix 17 — B.C. First Nations Energy and Mining Technical Advisory Committee Reports
- Appendix 18 — Written Comments Received by Letter & Email
- Appendix 19 — First Nations Consultation Interim Report; Section 5.0
- Appendix 20 — Graphic Representation of Responses in First Nations Feedback Forms

1 INTRODUCTION

The Integrated Resource Plan will set out how BC Hydro proposes to meet future growth in electricity demand over the next 20 years. In developing the Integrated Resource Plan, BC Hydro has been consulting with First Nations around the province.

This Consultation Report is a factual report that outlines BC Hydro's approach to consultation, documents the information BC Hydro has provided to First Nations on the development of the Integrated Resource Plan, and summarizes the input and feedback BC Hydro has heard from First Nations to date. The Consultation Report will assist BC Hydro in finalizing the Integrated Resource Plan, and will be provided to First Nations and to the Province of British Columbia.

2 BACKGROUND

British Columbia's 2010 *Clean Energy Act* requires BC Hydro to develop an Integrated Resource Plan for submission to the Minister of Energy for government approval. After the *Clean Energy Act* came into force, an amendment to the legislation extended the time period for submission of the first Integrated Resource Plan to government from 18 months (December 2011) to 30 months (December 2012).

BC Hydro's Integrated Resource Plan is a province-wide 20-year plan that describes how BC Hydro plans to meet future growth in demand for electricity. Underpinning this plan is BC Hydro's long-standing electricity planning objective to ensure a reliable, cost-effective electricity supply, and B.C.'s *Clean Energy Act*, including, among other things, requirements related to clean energy, greenhouse gas reduction and achieving electricity self-sufficiency.

Once completed, the Integrated Resource Plan will be updated periodically and at least every 5 years, as stipulated in the *Clean Energy Act*. This is consistent

with BC Hydro's practice of updating its previous long term plans on an ongoing basis to respond to changing conditions such as economic trends or government policy. Previous BC Hydro long term plans include the 2006 Integrated Electricity Plan and the 2008 Long Term Acquisition Plan.

The Integrated Resource Plan describes the actions BC Hydro recommends to meet growing demand so that BC Hydro customers will continue to receive affordable, clean and reliable electricity. The draft Integrated Resource Plan was developed considering input gathered in 2011 from First Nations, stakeholder and public consultation along with technical, financial, environmental, and economic development inputs. While specific projects are identified among the draft recommended actions, the Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements. In addition, BC Hydro will continue to ensure that consultation has been adequate and reasonable prior to signing energy procurement agreements with independent power producers.

BC Hydro has been undertaking consultation with First Nations on the development of the Integrated Resource Plan on behalf of itself and the Province of B.C. A letter from the Deputy Minister of the Ministry of Energy and Mines, dated February 17, 2011, sets out the request from the Province of B.C. for BC Hydro to undertake First Nations consultation on behalf of the Province (**Appendix 1**). BC Hydro's response to the Deputy Minister, dated March 2, 2011, confirms BC Hydro's agreement to undertake the requested consultation (**Appendix 2**).

3 CONSULTATION PROCESS

BC Hydro's consultation on the Integrated Resource Plan involves three distinct streams: a First Nations consultation stream; a technical stream; and a public and stakeholder stream. In all three consultation streams, BC Hydro sought input into

the development of a draft Integrated Resource Plan, as well as feedback on the completed draft of Integrated Resource Plan, issued in May 2012. The input and feedback from all three consultation streams will be considered by BC Hydro in developing the Integrated Resource Plan that will be submitted to Government.

The separate First Nations stream is a forum for discussion and input on matters related to the Integrated Resource Plan that are of particular interest to First Nations, whereas the other two streams are designed for the public at large and for those with technical expertise in areas relating to integrated resource planning. The information presented and received in all three consultation streams is available to First Nations on the BC Hydro IRP website at www.bchydro.com/irp.

3.1 Identification of First Nations

BC Hydro invited BC's First Nations and Tribal Councils / First Nations Organizations to participate in the development of the Integrated Resource Plan through a province-wide consultation process. BC Hydro also invited the BC First Nations Energy and Mining Council (BCFNEMC) to participate in the consultation on the development of the Integrated Resource Plan. The BCFNEMC has been formally mandated to guide the BC First Nations Energy Action Plan (2007) by the following three First Nations provincial political organizations: the Union of BC Indian Chiefs (UBCIC), the BC Assembly of First Nations (BCAFN) and the First Nations Summit (FNS). The involvement of the BCFNEMC is detailed in Section 4.4.

3.2 BC Hydro's Approach to First Nations Consultation

The First Nations consultation stream involved two rounds of regional workshops in March 2011 and June/July 2012 respectively, with participant funding and reimbursement of travel expenses offered to First Nations participants in these workshops. There was also an opportunity for First Nations to provide written

comments following both rounds of workshops. BC Hydro also invited First Nations to participate in the public and stakeholder consultation stream. In addition, BC Hydro has provided capacity funding for the BCFNEMC to participate in both the regional workshops and the Technical Advisory Committee, which is part of the technical consultation stream.

The following are the consultation objectives, an outline of the input and advice received from First Nations in developing the consultation process, and descriptions of the three different consultation streams and the opportunities for First Nations' involvement in each.

3.3 Objectives of Consultation

BC Hydro is committed to building meaningful and respectful relationships with First Nations. BC Hydro's consultation objectives are to:

1. Build awareness among First Nations about the Integrated Resource Plan and the planning process;
2. Inform First Nations about the opportunities to provide input into and feedback on the Integrated Resource Plan and encourage their participation;
3. Gather First Nations input into the development of the draft Integrated Resource Plan;
4. Gather First Nations feedback on the draft Integrated Resource Plan, including First Nations perspectives and preferences on the components of the Integrated Resource Plan;
5. Report back to First Nations with a summary of their input and feedback to BC Hydro on the Integrated Resource Plan;

6. Consider First Nations input and feedback along with technical, financial, environmental, and economic development input as BC Hydro evaluates, drafts and refines the Integrated Resource Plan;
7. Report back to First Nations with a summary of how their input into and feedback on the Integrated Resource Plan was considered; and
8. Ensure transparency in the consultation process.

3.4 Development of Consultation Approach

Given the number of First Nations in the province, it was not practical to engage all First Nations in a province-wide discussion on consultation design. Rather, BC Hydro invited several First Nations and First Nations Organizations from around the province to attend a workshop in Vancouver on September 24, 2010 to seek their input and advice on the consultation design. Seven participants attended the workshop where BC Hydro provided background information on the Integrated Resource Plan and outlined a proposed approach to consulting with First Nations on the development of the Plan. The input and advice received at the workshop is set out in the attached document titled “Summary of Input and Advice Received on BC Hydro’s Proposed Approach to Province-Wide First Nations Consultation” (**Appendix 3**). The input and advice received included:

- Increase the number of regional workshops from 5 to 8 or 9 and increase the amount of participant funding to attend a workshop.
- Provide First Nations with immediate notice of the development of the Integrated Resource Plan and hold a round of regional workshops in the fall of 2010 on the approach to consultation and on the resource options update.
- Integrate the input and concerns raised in the public and First Nations consultation streams.

- Prepare First Nations for informed discussion of the Integrated Resource Plan in advance of the regional workshops.
- Provide a non-technical explanation of what the Integrated Plan is and what it is not.
- Fund technical advisors trusted by First Nations for the duration of the development of the Integrated Resource Plan.
- Fund the BCFNEMC to coordinate with communities on the development of the Integrated Resource Plan.
- Provide opportunities to access financial resources at both the umbrella organization and community level and provide funding to individual First Nations to conduct their own studies or hire their own technical experts in connection with the development of the Integrated Resource Plan.
- Hold political level meetings involving First Nations and Government.
- Consider measures to assist in building relationships.

In developing its approach to consultation, BC Hydro considered the input and advice received along with other factors, such as any legal requirements for First Nations consultation, the timelines associated with legislated requirements to submit the Integrated Resource Plan to government, and the cost to BC Hydro's ratepayers.

3.5 First Nations Involvement in the Public and Stakeholder Stream

The public and stakeholder stream was designed for stakeholders and the public at large. As members of the public, First Nations participation was welcomed and encouraged. This participation provides the opportunity for more integration of the public and First Nations consultation streams, as per the input and advice received at the consultation design workshop held in September 2010.

3.6 First Nations Involvement in the Technical Consultation Stream

During the development of the Integrated Resource Plan, BC Hydro has been meeting with the Technical Advisory Committee, which functions to provide BC Hydro with ongoing expert advice and feedback into the integrated resource planning process. The information from the Technical Advisory Committee meetings is available on the BC Hydro website at www.bchydro.com/irp.

There are thirteen members of the Technical Advisory Committee representing a broad range of interests in the province. In addition to the BCFNEMC, Robert Duncan, CEO of the Hupacasath First Nation and Upnit Power Corporation is also a member of the Committee.

BC Hydro's technical consultation stream also included a consultation on the Resource Options Update, a process to update BC Hydro's database of resource potential in British Columbia, in the fall of 2010. BC Hydro invited input from individuals and organizations involved in the energy industry with technical information on the resource potential in British Columbia, including 10 First Nations invitees. Three First Nations invitees attended the launch workshop for the Resource Options Update on September 14, 2010, and three attended the workshop presentation of the draft results from the Resource Options Update on December 8, 2010. Following the December 8, 2010 workshop there was a comment period to the end of December to provide input on the draft Resource Options results. A representative from the BCFNEMC attended both the September and December workshops. BC Hydro provided participant funding in the amount of \$250.00 and reimbursement of eligible travel expenses to First Nations participants in the Resource Options Update process.

The demand-side management options to be considered in the development of the Integrated Resource Plan have been constructed in consultation with BC Hydro's Electricity Conservation and Efficiency (EC&E) Advisory Committee.

The EC&E Committee was established in 2006 and has three First Nations representatives.

3.7 First Nations Consultation Stream

The First Nations consultation stream provides a separate forum for B.C.'s First Nations, Tribal Councils, and First Nations Organizations, including the BCFNEMC, to provide input into and feedback on the draft Integrated Resource Plan. The information that BC Hydro has provided in its consultation with First Nations is consistent with the information provided in its public and stakeholder consultation stream. The First Nations consultation process included both regional workshops and written comment periods. An overview of each stage of the province-wide First Nations consultation process is provided in Tables 3.7.1 to 3.7.2.

Table 3.7.1 Input into the Development of the Draft Integrated Resource Plan

Opportunities for Input into the Draft Integrated Resource Plan	Date
<p>Regional Workshop Invitation and Pre-reading Notified First Nations of the development of the Integrated Resource Plan and the related consultation process and invited First Nations to attend regional workshops. Provided pre-reading material on the Integrated Resource Plan for consideration by participants before the regional workshops.</p>	Jan – Feb, 2011
<p>Round 1 Regional Workshops Provided information on the development of the Integrated Resource Plan and elicited input from First Nations to be considered in the development of a draft Integrated Resource Plan. Summaries of First Nations input from the workshops were provided to the participants.</p>	Mar 2-21, 2011
<p>Written Comments Opportunity for First Nations to provide written comments for BC Hydro to consider in developing the draft Integrated Resource Plan.</p>	Apr 30, 2011
<p>Interim Consultation Report Outlines the First Nations consultation process, the consultation activities to date and the input received from First Nations to the date of the report. The report was provided to First Nations and the provincial government.</p>	May 25, 2011

Table 3.7.2 Feedback on the Draft Integrated Resource Plan

Opportunities for Feedback on the Draft Integrated Resource Plan	Date
<p>Regional Workshop Invitation and Pre-reading Notified B.C.'s First Nations and Tribal Councils of the completion of the draft Integrated Resource Plan and made the draft plan available for review prior to the second round of Regional Workshops.</p>	May 2012
<p>Round 2 Regional Workshops Provide information on the draft Integrated Resource Plan and elicit First Nations feedback on the draft plan. The First Nations feedback from the workshops is summarized and provided to the participants.</p>	June 26 to July 13, 2012
<p>Written Comments Opportunity for First Nations to provide written comments on the summaries of feedback and/or the Draft Integrated Resource Plan for consideration by BC Hydro before submitting the Integrated Resource Plan to the provincial government.</p>	August 13, 2012
<p>Consultation Report BC Hydro's final report on the consultation undertaken by BC Hydro with B.C.'s First Nations, Tribal Councils/First Nations Organization, including the BCFNEMC, outlining the First Nations consultation process, consultation activities, and the input and feedback received from First Nations. The report will be considered by BC Hydro in refining the Integrated Resource Plan, which will be submitted to government for approval. The report will also be provided to First Nations and the provincial government.</p>	September 2012

3.7.1 Information Sharing and Communications

In order to facilitate information sharing and two-way communications with First Nations, BC Hydro has provided the following:

A toll free information line at 1-877-461-0166 Extension 3;

An email address 2011irp@bchydro.com and 2012irp@bchydro.com; and

A website page for the First Nations consultation stream that has been updated periodically throughout the consultation. The website page is linked to the main page of the public and stakeholder consultation website at www.bchydro.com/irp.

3.7.2 Participant and Travel Funding for First Nations, Tribal Councils, and First Nations Organizations

To facilitate the participation of First Nation representatives in the regional workshops, BC Hydro provided participant funding in the amount of \$250 per representative per workshop, for up to two participants from each attending First Nation, Tribal Council, or First Nation Organization. BC Hydro also reimbursed participants' travel expenses for attending a workshop.

4 CONSULTATION ACTIVITIES TO DATE

Between January and April 2011, BC Hydro's consultation activities on the Integrated Resource Plan were focused on sharing information on the planning process and receiving input from B.C.'s First Nations into the development of the draft Integrated Resource Plan, centred around six planning topics. From May 2012, when the draft was first made available, until August 2012, the focus of BC Hydro's consultation activities has been again to share information on the planning process, including important updates since 2011, as well as to seek First Nations' feedback on the draft recommended actions before the Integrated Resource Plan is submitted to government for approval.

4.1 Regional Workshop Invitation and Pre-reading

All BC-based First Nations were notified by BC Hydro about the development of the Integrated Resource Plan. A list of these First Nations, as well as Tribal Councils and First Nations Organizations notified of the consultation on the Integrated Resource Plan, is presented in **Appendix 4**. Copies of the notification letters and accompanying information packages are organized chronologically in **Appendix 5**. A summary of the content of these letters and information packages follows below.

By letter dated January 31, 2011, BC Hydro notified First Nations, Tribal Councils, and First Nations Organizations about the need for an Integrated Resource Plan. This letter advised that BC Hydro wished to receive First Nations input into the development of a draft of the Plan, and included an invitation to attend a regional workshop in March 2011. A second notification letter and information package, dated February 19, 2011, included additional background information on the Integrated Resource Plan and the key topics that BC Hydro would be addressing in the initial round of regional workshops.

By letter dated May 7, 2012, First Nations, Tribal Councils, and First Nations Organizations were notified that a draft Integrated Resource Plan would be available later that month, and that BC Hydro wished to receive their feedback on the draft Plan. An invitation to attend a regional workshop in June/July 2012 was also extended. On May 28, 2012, the date that the draft Integrated Resource Plan was released publicly, a follow up letter was issued to First Nations, along with the Executive Summary of the draft Integrated Resource Plan and Summary of Input received from First Nations during the workshops held in 2011.

The workshop “pre-reading” material enclosed with the notification letters was provided to First Nations to enable more informed discussion at the regional workshops, as per input and advice received by BC Hydro during the consultation design workshop in September 2010. All notification letters were

sent by fax and then mailed to the First Nations Band office or Tribal Council office. BC Hydro made follow-up telephone calls to all letter recipients to confirm that BC Hydro's invitations had been received and to determine if further information was required. Where requested, BC Hydro re-sent the notification package by email.

4.2 Regional Workshops

Between March 2 and 21, 2011, BC Hydro hosted nine one-day workshops in regional locations around the province, and eight one-day workshops between June 26 and July 13, 2012, in the same regional locations (except Castlegar).

Initially, the number of first round regional workshops was increased from five to nine in response to the input and advice received at the consultation design workshop in September 2010. Due to low turnout in Castlegar during the first round workshops there was no workshop in Castlegar during the second round workshops. However, BC Hydro did offer to reimburse travel expenses for First Nations from that area to attend another regional workshop.

The purpose of the regional workshops was to share information on the Integrated Resource Plan and to invite input from B.C.'s First Nations on the development of the draft Integrated Resource Plan, and once a draft plan was developed, to seek feedback from First Nations on the draft . All workshops were facilitated by a neutral facilitator.

The schedule and locations for the 2011 and 2012 regional workshops is provided in Table 4.2.1 and Table 4.2.2.

Table 4.2.1 Schedule of 2011 Regional Workshops and Locations

Location	Date
Nanaimo	March 2, 2011
Campbell River	March 3, 2011
Abbotsford	March 4, 2011
Kamloops	March 7, 2011
Vancouver	March 11, 2011
Terrace	March 14, 2011
Fort St. John	March 16, 2011
Prince George	March 17, 2011
Castlegar	March 21, 2011

Table 4.2.2 Schedule of 2012 Regional Workshops and Locations

Location	Date
Campbell River	June 26, 2012
Nanaimo	June 27, 2012
Fort St. John	July 5, 2012
Prince George	July 6, 2012
Kamloops	July 9, 2012
Terrace	July 11, 2012
Vancouver	July 12, 2012
Abbotsford	July 13, 2012

4.2.1 First Nations Participation in the Regional Workshops

A total of 146 individuals, representing 90 First Nations, Tribal Councils and First Nations Organizations, registered to attend the 2011 workshops. Attendance at the regional workshops totalled 121 participants, representing 78 First Nations, Tribal Councils, and First Nations Organizations. A representative from the B.C. First Nations Energy and Mining Council (BCFNEMC) attended each of the nine regional workshops in 2011.

A total of 121 individuals, representing 68 First Nations, Tribal Councils, and First Nations Organizations, registered to attend the 2012 workshops. Attendance at the 2012 regional workshops totalled 117 participants, representing 69 First Nations, Tribal Councils, and First Nations Organizations. A representative from the BCFNEMC attended seven of eight of the regional workshops in 2012.

Table 4.2.1.1 lists the First Nations, Tribal Councils and First Nations Organizations that were represented at the 2011 regional workshops, and Table 4.2.1.2 lists those represented at the 2012 regional workshops. A list of registrants and attendees, along with their affiliations, is available in (**Appendix 6**).

Table 4.2.1.1 – 2011 Workshop Attendance

Nanaimo – March 2	Campbell River - March 3	Abbotsford - March 4
K'omoks First Nation First Nations Energy and Mining Council Lyackson First Nation Pauquachin First Nation Penelakut Tribe Toquaht Nation Tsawout First Nation Tseshaht First Nation Ucluelet First Nation	Campbell River Indian Band Cowichan Tribes First Nations Energy and Mining Council Kwakiutl District Council Quatsino First Nation	Cheam First Nation First Nations Energy and Mining Council First Nations Summit Katzie First Nation Leq' a: mel First Nation Matsqui First Nation Samahquam First Nation Skatin Nations Skawahlook First Nation Soowahile Indian Band Sto:Lo Tribal Council Tsawwassen First Nation
Kamloops - March 7	Vancouver - March 11	Terrace - March 14
Adams Lake Indian Band Bridge River Indian Band Canim Lake Band Canoe Creek Band First Nations Energy and Mining Council Kanaka Bar Indian Band Nooaitch Indian Band Splats'in First Nation St'át'imc Chiefs Council T'it'q'et First Nation Xaxli'p	Bonaparte Indian Band Chawathil First Nation Xa'xtsa First Nation First Nations Energy and Mining Council Heiltsuk Nation In-Shuck-Ch Tribal Council Lower Nicola Indian Band N'Quatqua First Nations Old Massett Village Council Skii km Lax Ha Sliammon First Nation St. Mary's Band Sto:Lo Nation Sts'ailes Tl'etinqox-t'in Government Office	Dease River First Nation First Nations Energy and Mining Council Gitanmaax Band Gitga'at Nation Kitsumkalum Lax-Kw'Alaams Band Metlakatla Nisga'a Village of Gingolx Nisga'a Village of New Aiyansh Skidegate Band Council
Fort St. John - March 16	Prince George - March 17	Castlegar - March 21
Blueberry River First Nations First Nations Energy and Mining Council Treaty 8 Tribal Association	Carrier Chilcotin Tribal Council First Nations Energy and Mining Council Gitsegukla Band Gitxsan Treaty Society (Hereditary Chiefs) Kwadacha Nation Kwakiutl Indian Band Lake Babine Nation Lhatko Dene Nation Lheidli T'enneh First Nation McLeod Lake Indian Band Nadleh Whut'en First Nation Nak'azdli Band Nazko First Nation Saik'uz First Nation Tahltan Indian Band Takla Lake First Nation Tsay Keh Dene Wet'suwet'en First Nation Xeni Gwet'in First Nations Gov.	First Nations Energy and Mining Council Ktunaxa Nation Council Society

Table 4.2.1.2 - 2012 Workshop Attendance

Campbell River – June 26	Nanaimo – June 27
Da'naxda'xw First Nation First Nations Energy & Mining Council Huu-ay-aht First Nations K'omoks First Nation Kwakiutl District Council Qualicum First Nation St. Mary's Band We Wai Kai Nation	First Nations Energy & Mining Council Lyackson First Nations Penelakut Tribe Quatsino Tsawout First Nation Tseshaht First Nation
Fort St. John – July 5	Prince George – July 6
First Nations Energy & Mining Council Treaty 8 Tribal Association West Moberly First Nations	Burns Lake Cheslatta Carrier Nation Cheslatta Carrier Nation First Nations Energy & Mining Council Gitsegukla Band Gitxsan Treaty Society Lake Babine Nation Lheidli T'enneh First Nation Lhtako Dene Nation Nadleh Whut'en Band Nak'azdli Band Nazko First Nation Nee-Tahi-Buhn Indian Band Saik'uz First Nation Takla Lake First Nation Tl'azt'en Nation
Kamloops – July 9	Terrace – July 11
Ashcroft Band Canim Lake Band Coldwater Indian Band First Nations Energy & Mining Council Llenlenny'ten Lower Nicola Indian Band Nooaitch Indian Band Skeetchestn Band Splats'in First Nation Williams Lake	Gitanmaax Band Gitanyow Gitwangak Gitwinksihlkw Haisla Nation Kitselas Moricetown Nisga'a Village of Gingolx Nisga'a Village of New Aiyansh Office of the Wet'suwet'en
Vancouver – July 12	Abbotsford – July 13
Council of the Haida Nation First Nations Energy & Mining Council Gitga'at Gitxsan Nation Ktunaxa Nation Council Society N'Quatqua First Nations Old Massett Village Council Sto:Lo Nation Sto:Lo Tribal Council Sts'ailes T'Sou-ke First Nation Tobacco Plains Indian Band Yale First Nation	Aitchelitz Band Boston Bar First Nation Chawathil First Nations Energy & Mining Council Heiltsuk First Nation In-Shuck-Ch Nation Leq:amel First Nation Simpco First Nation Sto:Lo Tribal Council Tzeachten First Nation Yakwekwioose Band

4.2.2 Information Provided at Regional Workshops

A neutral facilitator, Dan George, guided the discussions at the regional workshops based on agendas developed in advance of the workshops. Agendas for 2011 and 2012 are presented in **Appendix 7**.

At the outset of each workshop, the facilitator presented his approach to facilitating the discussion. For the 2011 workshops, BC Hydro provided information on the Integrated Resource Plan and how it would be developed, using the following planning topics as a framework:

Conservation and Efficiency;

Electrification;

Electricity Generation Options,

Transmission Planning,

Export Market Potential; and

Clean or Renewable Energy Development in First Nation Communities.

In the 2012 workshops, BC Hydro presented the draft recommended actions, and the rationale for each. BC Hydro also presented information on the evolving planning context and the consultation input from 2011 that was considered in the development of the draft actions.

Copies of BC Hydro's regional workshop presentations for both 2011 and 2012 are included in **Appendix 8**. As per the input and advice received from First Nations at the consultation design workshop in September 2010, the information on the Integrated Resource Plan was presented in non-technical language.

In addition to the verbal input and feedback provided by participants during the workshops, participants were also asked to complete a "First Nations Input Form" in 2011 and a "First Nations Feedback Form" in 2012 (**Appendix 9**).

In 2011, participants were also given a copy of the public and stakeholder consultation workbook entitled “Planning for a Clean Energy Future” which provided details on the need for the Integrated Resource Plan and the key planning topics for the development of a draft Plan. In 2012, participants were provided with a copy of the public and stakeholder consultation “Discussion Guide,” which provided details on and the rationale for the draft recommended actions contained within the draft Integrated Resource Plan. Both the 2011 workbook and the 2012 Discussion Guide can be found in **Appendix 10**.

4.2.3 Summaries of Input and Feedback from Regional Workshops

BC Hydro prepared summaries of the input and feedback received from First Nations participants at each of the regional workshops. Summaries of 2011 input are included in **Appendix 11**, and summaries of 2012 feedback are found in **Appendix 12**. For a review of the 2011 summaries and details of the 2012 summaries, see Section 5.0.

Summaries of the 2011 workshops were sent out with a distribution letter on April 8, 2011 by e-mail. Each workshop participant received a summary of the input from the workshop they attended and an invitation to provide written comments on the summary of input and on the development of the draft Integrated Resource Plan by April 30, 2011. A copy of the April 8, 2011 letter and applicable summary were also faxed to the offices of the First Nations, Tribal Councils, and First Nations Organizations represented by participants. On May 5, 2011, BC Hydro posted the summaries of input on the First Nations page of the Integrated Resource Plan website (www.bchydro.com/irp).

Summaries of the 2012 workshops were sent out with a distribution letter by e-mail to each workshop participant, approximately two weeks following the date of the workshop they attended. The first summary (for the Campbell River workshop) was distributed on July 17, 2012, and the last summary (for the Abbotsford workshop) was distributed on July 27, 2012. This approach was taken

to provide the participants with the summaries as much in advance as possible of the closure of the written comment period on the draft Integrated Resource Plan, set for August 13, 2012. Along with the summaries, participants were invited to provide written comments by the August 13, 2012 deadline. As in 2011, a copy of the cover letter and applicable summary were faxed to the offices of the First Nations, Tribal Councils, and First Nations Organizations represented by participants. Workshop summaries were also posted to the First Nations' page of the Integrated Resource Plan website (www.bchydro.com/irp) at the same time they were distributed to workshop participants.

Distribution letters for the 2011 and 2012 summaries are included in **Appendix 13**.

4.3 First Nations Written Input and Feedback

After each workshop in 2011, and in addition to the distribution of the summaries of workshop input, BC Hydro emailed a follow-up letter to the participants along with an electronic version of the "First Nations Input Form," seeking their written comments on the development of the Integrated Resource Plan by April 30, 2011. The same approach was taken in 2012, with an electronic version of the "First Nations Feedback Form" sent by BC Hydro to each participant following each workshop, seeking their written comments on the draft Integrated Resource Plan by August 13, 2012. Follow up letters for both 2011 and 2012 are included in **Appendix 14**.

4.4 Role of BC First Nations Energy and Mining Council

In the capacity funding agreement that the BCFNEMC signed with BC Hydro, the BCFNEMC notes that it is accountable to, and receives direction from, the First Nations Leadership Council (FNLC) and First Nations in BC. The BCFNEMC monitors and keeps the FNLC and First Nations informed of emerging issues, and conducts research and analysis on energy and mining issues.

4.4.1 Capacity Funding

BC Hydro has provided capacity funding to the BCFNEMC for their involvement in the development of the Integrated Resource Plan and the related consultation process. The involvement of the BCFNEMC addresses in part the input and advice provided to BC Hydro by First Nations during the consultation design workshop. The capacity funding agreement between BC Hydro and the BCFNEMC, dated March 3, 2011 (**Appendix 15**), provides funding for the BCFNEMC to undertake the following activities:

Participate in BC Hydro's Integrated Resource Plan Technical Advisory Committee (TAC);

Participate in all of BC Hydro's First Nations regional workshops on the development of the Integrated Resource Plan;

Act as a resource to First Nations Communities by providing First Nations leadership with information about the development of the Integrated Resource Plan and the involvement of the BCFNEMC in BC Hydro's consultation process on the Integrated Resource Plan. Keep the member organizations of the First Nations Leadership Council, and if requested, a First Nations Community, informed of the activities, information developed, and technical and policy decisions of the BCFNEMC as they relate to BC Hydro's consultation process on the Integrated Resource Plan; and

Prepare one or more written reports in relation to the development of the Integrated Resource Plan and provide it to BC Hydro and all First Nations who request it (see Section 5.2.2).

4.4.2 Involvement in Regional Workshops

The BCFNEMC attended all nine First Nations regional workshops in 2011 and seven of the eight in 2012, and were invited to share with participants who they are, their mandate, as well as their involvement in the Integrated Resource Plan

process. At the workshops, the BCFNEMC informed participants about their membership in the Technical Advisory Committee, and described their participation in the regional workshops as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and Tribal Councils that cannot or choose not to participate. They are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation; and
- At the end of all the sessions, to compile a formal response to BC Hydro on the BCFNEMC's perspective of the process and the issues they heard raised by First Nations.

5 FIRST NATIONS INPUT AND FEEDBACK

At regional workshops and through subsequent written comments, First Nations provided input into the development of the draft Integrated Resource Plan in 2011, and provided feedback on the draft Plan in 2012. The BCFNEMC also provided key comments and recommendations in four separate documents, two relating to their involvement in the two rounds of First Nations regional workshops, and the other two relating to their involvement in the Technical Advisory Committee. This section provides a high-level summary of First Nations input received on the six planning topics that were the focus in 2011, followed by a detailed accounting of feedback received in 2012 from First Nations on the draft Integrated Resource Plan, specifically on the draft recommended actions.

5.1 Summary of First Nations Input from 2011 into Development of the Draft Integrated Resource Plan

First Nations input into the development of the draft Integrated Resource Plan was received by BC Hydro verbally and in writing. First Nations input from each regional workshop was summarized separately (**Appendix 11**). Additional written comments were provided to BC Hydro following the 2011 workshops and were set out in either a First Nation Input Form (**Appendix 9**) or by letter (**Appendix 18**). In addition, the BCFNEMC submitted two longer reports containing their comments, one arising from their involvement in the Technical Advisory Committee (**Appendix 17**) and the other from their involvement in the First Nations regional workshops (**Appendix 16**).

Presented below are summaries of input received in 2011 on the six planning topics of conservation and efficiency, electricity generation options, electrification, transmission planning, export market potential, clean or renewable energy development in First Nations communities, and the consultation process. For further details on input received, see Section 5.0 of the Interim Report which is now attached to this report at **Appendix 19**.

5.1.1 Input on Conservation and Efficiency

There was widespread support among First Nations participants for greater conservation and efficiency. However, a concern over the cost of conservation was a recurring theme. There was a concern that First Nations, many of who are economically disadvantaged and live in homes that are not energy efficient, would be burdened with higher electricity rates and unaffordable energy efficiency upgrades. There was also a perception among some participants that business and industry are not doing their part to conserve and a perceived conflict between economic growth and conservation. Many participants expressed concern about the environmental impact of certain conservation and efficiency measures, such as the potential impact of disposing of hazardous waste (e.g. batteries and LED bulbs).

Recommendations included more funding for energy efficient upgrades and financial incentives for conservation and efficiency through programs such as net metering. There was also significant interest in education and engagement with First Nations communities, especially with First Nations youth, to build capacity to participate in greater conservation and efficiency. The BCFNEMC recommended that there be funding for First Nation Community Energy Managers to support energy conservation in First Nation communities.

5.1.2 Input on Electricity Generation Options

In the first round regional workshops, BC Hydro presented three example portfolios to participants. The purpose of the example portfolios was to illustrate, in a non-technical fashion, the key trade-offs that arise between broad electricity generation options and to seek First Nations' input in order to understand their general perspectives on these types of portfolios. The level of discussion on portfolios and specific resource options varied between workshops. At some sessions First Nations participants provided comments on the specific examples portfolios, but in most cases the input received was directed to the topic of

electricity generation options in general. None of the example portfolios received significant support from First Nations and there were many requests for more information on portfolios before expressing a preference. Many participants were reluctant to provide input on preferences relating to portfolios without more information on how the Integrated Resource Plan might affect their communities. There was interest in taking a First Nations territory view of planning rather than a province-wide view and more involvement in the planning process (this input is addressed further under the heading Consultation Process).

There was a significant concern about increasing electricity rates and the cumulative environmental impacts of generation development. On the other hand there was significant interest in economic development opportunities for First Nations in relation to energy development, and the associated jobs and revenue.

The BCFNEMC commented that First Nations strongly support clean or renewable energy development in part because of climate change. However, the BCFNEMC states that the cost of future development projects must be taken into account in long-term planning and that a focus on conservation and sustainability can help ensure increasing electricity prices do not become a burden on local residents, or become a barrier to other types of economic development.

There was an interest in seeing more resource options included in the portfolios, including solar, geothermal, biomass, wave and tidal. There was a general preference for developing clean or renewable resources with the exception of Site C. Many participants did not consider Site C “clean”. The recurring themes from the input on Site C were either opposition, or that the consent of the impacted First Nations is required for the project to proceed. There was significant interest in community based energy projects.

5.1.3 Input on Electrification

The input of First Nation participants regarding electrification varied. There was both support and opposition to taking a proactive approach to electrification while others commented that there was a “disconnect” between the benefits of electrification and the concerns of First Nations communities many of which are poor, in rural areas and not connected to the electricity grid. There was a perception among many participants that electrification will benefit urban areas at the expense of rural First Nation communities. The BCFNEMC recommends that extending the BC Hydro grid service to remote communities should be a priority of electrification.

Opposition to electrification was primarily due to a concern that electrification may lead to higher electricity rates and greater environmental impact on the land through more generation and transmission projects. While supportive of actions that reduce GHG emissions, the BCFNEMC states that the potential benefits of GHG emission reductions need to be weighed against the environmental impacts of electricity generation and transmission projects.

5.1.4 Input on Transmission Planning

With some exceptions, there was a general preference for a proactive approach to transmission planning provided that it is done with the early involvement and accommodation of the affected First Nations. Although the topic of transmission planning involves potential future transmission infrastructure many participants were focused on compensation for the historical impacts of existing transmission infrastructure on asserted First Nations rights and title.

Many participants indicated that transmission benefits urban communities at the expense of rural First Nation communities. It was recommended that economic development opportunities for First Nations be a consideration in transmission planning. The BCFNEMC recommends that isolated communities currently served by diesel generation should be a priority for new transmission access.

There was a concern about the cumulative environmental impacts of transmission infrastructure. Recommendations included, maximizing the use of existing transmission lines and corridors and plan where not to build transmission lines.

5.1.5 Input on Export Market Potential

There were many participants who expressed support for electricity exports provided that First Nations share in the benefits. There were several benefits identified, including revenue sharing, ownership interest in the export projects, and reduced electricity rates. The BCFNEMC stated that the concept that economic benefits would flow primarily to the provincial government is unacceptable.

Some participants in the workshops expressed opposition to acquiring renewable energy from independent power producers for the purpose of export. Among other things, there was a concern that export of electricity will put a greater strain on the environment and because of the economic risks involved (notwithstanding the *Clean Energy Act* protects ratepayers from the risk of loss due to export).

The BCFNEMC notes that BC Hydro will have a substantial amount of clean and renewable electricity available for export in most years and states that it is difficult to understand how a case could be made that acquiring additional electricity resources to serve the export market could result in economic benefits to British Columbia.

Whether exporting electricity or not, several participants indicated that domestic need for electricity should not be subordinated to the electricity needs in other jurisdictions.

5.1.6 Input on Clean or Renewable Energy Development

There was significant interest in creating revenue and jobs for First Nations communities through participation in clean or renewable energy development.

There was also significant interest in connecting remote communities to the electricity grid or alternatively having remote communities become energy self-sufficient through clean or renewable generation projects that replace diesel generation. Apart from clean or renewable energy developments, participants were also interested in employment and business opportunities with BC Hydro.

There was a substantial amount of input on BC Hydro's power acquisitions processes. The input was directed at ensuring First Nations would benefit from clean or renewable energy projects and that their asserted rights and title would be respected and accommodated. There was frustration with BC Hydro's previous power acquisitions processes because of, among other things, the lack of success of some First Nations proponents and the cost and complexity of the process for First Nations proponents. In addition, there is a concern that First Nations will spend limited resource participating in consultation with proponents in a power call process without any assurance of a corresponding benefit because many proponents seeking to consult with First Nations may not be awarded an Energy Purchase Agreement.

Recommendations included capacity building and incentives for First Nations so they could effectively participate in clean or renewable energy development. Changes to BC Hydro's power acquisitions processes to support First Nations projects, such as a First Nations only power call. There was also a recommendation to undertake a feasibility study (involving key First Nations participants) on how First Nations can participate in clean or renewable energy development.

5.1.7 Input on Consultation Process

At several of the regional workshops participants expressed significant concern about the First Nations consultation process for the Integrated Resource Plan. Almost every participant who provided input on this issue did not consider the process "consultation".

There was a concern about the legal implications of the word consultation and the implications to First Nations resulting from their participation in the process. This issue was compounded by the fact that the future implications of the Integrated Resource Plan on individual First Nations communities was unclear to participants and there was a concern that it may be used to justify later decisions that First Nations might oppose.

There was a wide range of views regarding what was required for consultation to occur. These included the following:

- Revenue sharing;
- Compensation for past grievances;
- Partnership between First Nations and BC Hydro in the decision-making process for the Integrated Resource Plan and earlier involvement from First Nations than is presently the case;
- An understanding of the impacts of the Integrated Resource Plan from a First Nations territory perspective;
- Sufficient capacity funding available to individual First Nations so they understand the technical aspects of the Integrated Resource Plan, in particular the portfolios being developed by BC Hydro's energy planners;
- Involvement of senior leaders from BC Hydro and government in the process; and
- Meetings with BC Hydro in individual First Nation communities.

5.2 Summary of First Nations Feedback from 2012 on the Draft Integrated Resource Plan

First Nations feedback on the draft Integrated Resource Plan was received by BC Hydro verbally and in writing. First Nations feedback from each of the eight regional workshops was summarized separately (**Appendix 12**). Additional

written comments were provided to BC Hydro following the 2012 workshops and were set out in either a First Nation Feedback Form (**Appendix 9**) or by letter/e-mail (**Appendix 18**). In addition, the BCFNEMC submitted two longer reports containing their comments, one arising from their involvement in the Technical Advisory Committee (**Appendix 17**) and the other from their involvement in the First Nations regional workshops (**Appendix 16**). This section details the feedback received during the regional workshops first, followed by feedback received in writing, based on the following four sets of draft recommended actions:

- Conserve More;
- Build and Reinvest More in Existing Assets;
- Buy More Made-in-BC Power; and
- Prepare for Potentially Greater Demand.

Additional feedback not specific to the draft recommended actions is presented in its own section following a review of the feedback on the draft recommended actions.

5.2.1 2012 First Nations Regional Workshops

The following is an overview of the feedback received from First Nations at the 2012 regional workshops, organized according to the four sets of draft recommended actions and based on the summaries of feedback from each regional workshop, contained in **Appendix 12**. Additional feedback not specific to the recommended actions, including feedback on the consultation process for the Integrated Resource Plan, is summarized in Section 5.2.1.5.

BC Hydro heard many perspectives from First Nations participants in the regional workshops. Some of these perspectives were shared by representatives of more than one workshop participant or First Nation while others were solely the views of one individual. There was no single First Nations view expressed.

5.2.1.1 Conserve More

BC Hydro sought to understand First Nations' perspectives on the "Conserve More" set of draft recommended actions, identified as follows:

Recommended Action 1a: Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

Recommended Action 1b: Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours.

Recommended Action 2: Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

Feedback on the recommended actions relating to conservation was largely supportive, centering on the annual savings target, conservation measures, education, and affordability. The following section is a summary of comments and recommendations offered by First Nations in the regional workshops on the "Conserve More" set of recommended actions. For a more detailed summary of feedback by regional workshop, see **Appendix 12**.

5.2.1.1.1 Comments and Recommendations – Conserve More

Annual Savings Target

- There was a concern that BC Hydro might be setting the bar too low with the 9,800 gigawatt-hour annual savings target if this amount was based on what other utilities were doing; rather, the view was that conservation targets should be set on the basis of what is required from a sustainability perspective and how that might be achieved.
- There was a perception that the conservation efforts of domestic customers may be benefitting others, including BC Hydro and non-domestic consumers,

or that these efforts may be only postponing impacts on future generations because of inevitable growth in electricity demand.

- There was a concern that if BC continues to grow as BC Hydro is forecasting, the province will run out of resources to generate electricity, irrespective of conservation.

Conservation Measures

- It was important for BC Hydro to take a leading role in raising conservation and efficiency standards, as well as in influencing industry to adopt these standards.
- There was support for curbing overall and peak demand through conservation measures such as time of use rates, and by approaches that utilize “peer pressure” to reduce demand (e.g., providing residential customers with their use compared to nearby households on their electricity bills).
- BC Hydro should provide customers with a free in-home device to track their own energy consumption.
- BC Hydro should consider a targeted mechanism to reach homeowners of inefficient rental properties that result in high energy bills for tenants.
- There was interest in Power Smart programs and how to access these programs, as well as a recommendation that specific incentives to adopt these programs be equally accessible across all income brackets.

Education

- There was an interest in having the amount of conservation savings communicated in a manner that was easily understood, rather than in gigawatt hours.
- BC Hydro should provide customers with more education and concrete examples of the actual savings that can be achieved over time by conservation efforts that may be relatively expensive up front, but save money

in the long run (e.g., there should be information for consumers on the long term cost savings associated with purchasing a high efficiency appliance with a higher purchase price rather than the cheapest one available, which will likely cost more in the long run).

Affordability

- There was a concern with the high cost of heating with electricity, even when supplemented with wood, and it was suggested that BC Hydro help First Nations to put a plan in place to invest in district heating through biomass, which has high capital costs but long term payback.
- There was an interest in knowing what measures or help may be available to First Nations to help them build more energy efficient homes, as it was already expensive for them to build homes to bare minimum standards, never mind to standards that would allow First Nations to take part in conservation.

5.2.1.2 Build and Reinvest More in Existing Assets

BC Hydro sought to understand First Nations' perspectives on the "Build and Reinvest More" set of draft recommended actions, identified as follows:

Recommended Action 3: Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in service date, subject to environmental certification and fulfilling the Crown's duty to consult and, where appropriate, accommodate Aboriginal groups.

Recommended Action 4: Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.

Recommended Action 5: Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.

Recommended Action 6: Fill the short-term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

Recommended Action 7: Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.

There was significant opposition to draft Recommended Action 3 on Site C expressed by some First Nations, who were largely local to the Site C area. First Nations in regions not local to the Site C area were generally supportive of whatever position First Nations local to the proposed Site C area took in relation to Site C.

With regard to draft Recommended Action 4 on Revelstoke 6, there was a reluctance to provide feedback without more information on the potential impacts of the installation of a sixth generating unit. There was limited feedback on draft Recommended Action 5 relating to other Resource Smart projects and draft Recommended Action 6 regarding market purchases, the Columbia River Entitlement, and Burrard Thermal.

While key feedback on the transmission upgrades contained in Recommended Action 7 centred on the view that industrial customers should bear the costs of these upgrades, there was also concern that the recommended actions relating to these upgrades, Site C, and Revelstoke 6 appeared to be about fully committed projects, even though participants were being told that the Integrated Resource Plan did not commit BC Hydro to any specific capital project. There was a perception that these projects were therefore inevitable, irrespective of feedback.

The following section is a summary of comments and recommendations offered by First Nations in the regional workshops on the “Build and Reinvest More” set

of recommended actions. For a more detailed summary of feedback by regional workshop see **Appendix 12**.

5.2.1.2.1 Comments & Recommendations — Build and Reinvest More

Site C

- There was significant opposition to Site C by some First Nations as well as the Treaty 8 Tribal Association whose member First Nations are in the northeast of the province.
- A perceived long-standing government policy of maximizing the hydroelectric potential of the Peace and Columbia was viewed as creating a bias or prejudice on the part of BC Hydro toward Site C, and specifically that the continuous application of this policy over the years has limited the options that BC Hydro can consider for the Peace, and to such an extent that Site C is now the only available option.
- The opinion was expressed that the process of consultation on the Integrated Resource Plan is flawed because it wrongfully relies on a policy of maximizing the hydroelectric potential of the Peace River, rather than on reconciliation between BC Hydro, the BC government, and First Nations.
- There was a repeated concern by a few participants about a perceived dependency of the Integrated Resource Plan on Site C and on the assumption that there is no limit to development.
- A plan built around Site C had a fatal flaw and leaves very little that is constructive as a response.
- It was felt that, while the government's "taking up" right under Treaty 8 should be understood and balanced against the right of First Nations to have the land that was not taken up to pursue a traditional way of life, the cumulative effects of industrial and hydroelectric development in the Peace region have left First Nations with virtually no land that has not already been taken up or impacted

in some way, and the recommended action for Site C, which would result in further inundation of the land, has failed to take this into account.

- The current approach of BC Hydro and the BC government on Site C was viewed as an exclusively economic approach that First Nations find troubling and inconsistent with Treaty 8, the courts, and their own views.
- It was recommended that planning for the Peace should be in the context of real ecological limits, and that a regional strategic environmental assessment would be an effective tool for informing an Integrated Resource Plan.
- The flooding that would result from Site C did not just mean the loss of land; it was a loss of the cultural connectedness to who First Nations are, individually and collectively, and therefore the flooding represented the death of values, identity, and often individuals who give up.
- There was a concern about the future development that Site C will stimulate across the province.
- There was a view among many participants that it was only appropriate for First Nations to provide feedback on recommended actions that involved their traditional territories and therefore that they either had no feedback on Site C or supported the position of the First Nations in the area where the project is located.
- There was interest in BC Hydro's contingency plan in the event Site C was not approved.
- It was observed that natural gas looked cheap compared to Site C based on current cost per megawatt hour, while at the same time recognizing that gas price changes and emissions would be additional considerations.
- It was noted that the Integrated Resource Plan was being developed without consulting First Nations downstream of Site C.

Site C/Revelstoke 6

- There was a perception that the Integrated Resource Plan has an undue reliance on Site C and Revelstoke 6, and that this reliance had the effect of “babying” the liquefied natural gas (LNG) industry, which it was felt should be encouraged by BC Hydro to self-supply.
- Several participants were of the view that they were being asked for feedback on projects (e.g., Site C, Revelstoke 6) that were going to be built anyway, and that they are frustrated with this.

Revelstoke 6

- There was reluctance to provide feedback on Revelstoke 6 without more information on the potential downstream impacts and how it might affect lake water levels.
- Concern and disagreement were expressed with BC Hydro’s characterization of the installation of a sixth generating unit at the Revelstoke powerhouse as having no or minimal environmental impact.
- The exemption of Revelstoke 6 and other exemptions from the British Columbia Utilities Commission process was identified as a concern, and perceived as a “get out of jail free card” for BC Hydro.

Market Purchases, Columbia River Treaty, Burrard Thermal

- Support was expressed for using the Columbia River Treaty entitlement as a short-term solution.
- There was concern that relying on the entitlement could expose BC Hydro to potentially higher global market prices.
- Reliance on the entitlement was questioned on the basis that the United States was decommissioning dams on the Columbia River.

- It was suggested that BC Hydro ought to be making investments in smaller renewable projects that are longer term solutions, even if those investments are more expensive.
- It was recommended that BC Hydro hold regional or local sessions with First Nations to talk specifically about the Columbia River Treaty entitlement, as it was felt that the effects of the entitlement on the southeast part of the province had been huge, resulting in whole villages disappearing, but with no compensation for these historical impacts.

Transmission Requirements

- Even though participants were being told that the Integrated Resource Plan did not commit BC Hydro to any specific capital project, there was a feeling that the transmission upgrades were fully committed projects.
- There was a concern voiced about further environmental damage as a result of more transmission, and a question about why more might be needed.
- Information on electromagnetic field (EMF) effects from the recommended action on transmission requirements was important to provide First Nations.
- Given rates and bills that were already considered too high, participants felt that industrial customers, not consumers, should bear the costs of transmission upgrades, as it appeared the upgrades were needed to serve the requirements of the liquefied natural gas (LNG) and mining industries in the North.

5.2.1.3 Buy More Made-in-BC Power

BC Hydro sought to understand First Nations' perspectives on the "Buy More" draft recommended action, identified as follows:

Recommended Action 8: Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2012-2018 time period.

There was substantial interest in greater First Nations involvement in clean or renewable energy production; however, significant barriers to greater involvement were identified, and participants felt strongly that BC Hydro should be doing more to help First Nations overcome these barriers.

Feedback also identified a preference for the generation of power close to the consumption of that power, rather than its transmission to or from other regions. There was also interest in the types of resource options BC Hydro would consider in an energy procurement process.

The following section is a summary of comments and recommendations offered by First Nations in the regional workshops on the “Buy More” set of recommended actions. For a more detailed summary of feedback by regional workshop, see **Appendix 12**.

5.2.1.3.1 Comments & Recommendations — Buy More Made-in-BC Power

Participation in Clean/Renewable Energy Development

- BC Hydro should be investing more in First Nations by helping them and small/remote communities become more involved in small independent power projects, even if it might be more expensive for BC Hydro to buy that power.
- It was felt that for First Nations to successfully take advantage of participation opportunities in clean/renewable energy projects there was a need for more information on BC Hydro’s procurement objectives and how the procurement process works.
- Access by First Nations to technical expertise or identified points of contact within BC Hydro was recommended to assist First Nations in making informed decisions with respect to investing limited time and resources in clean/renewable energy projects.
- First Nations procurement targets or rights of first refusal on procurement opportunities in their region were suggestions offered by participants as ways

to increase First Nations involvement and reduce missed opportunities to generate revenue from clean/renewable energy production.

- It was stated that it was hard for First Nations to find funding to support their involvement in independent power production, and that BC Hydro should help First Nations finance these projects.
- Based on a participant's experience, money can be spent fast on clean energy projects without results, and First Nations should be wary of becoming further involved with these projects and the risk of going into debt.
- There was a concern that the timelines for BC Hydro to make decisions on whether to acquire power is too long and not in sync with the timelines of business.
- On northern Vancouver Island, there was concern that the transmission system did not have sufficient capacity to take on new interconnections from independent power projects.
- There was a concern about the ability of First Nations to respond to the increase in referrals from the "gold rush" on independent power projects, and the potential environmental footprint.
- A need was identified to see more renewable energy contracts between developers and First Nations, for First Nations to make money on these developments, and for BC Hydro to sit down with First Nation to talk about how many projects are planned for their territories and what accommodation for those projects may look like.

Local Generation and Use

- There was a strong preference for acquiring power closer to the consumers of power, rather than exporting power from one region, where impacts are experienced, to another region for the purposes of providing electricity to the importing region.

- There was a view that it made more sense to produce power locally than building a new transmission line from Prince George to Williston.
- It was suggested that BC Hydro re-evaluate transmission costs for independent power projects located in the north and that any change in the evaluation criteria be communicated to independent power producers so that it can be communicated to investors.

Resource Options

- There was a concern that, according to numbers provided by BC Hydro, the relatively cheap price of natural gas compared to the price of clean energy acquired through BC Hydro's Standing Offer Program makes independent power production of clean/renewable energy uncompetitive with natural gas.
- While there as a view that the new government policy to exempt gas-fired generation for liquefied natural gas (LNG) plants could kill clean energy projects, there was also interest in knowing whether it created an opportunity for natural gas projects to sell electricity to BC Hydro.
- BC Hydro was encouraged to consider out-of-the-box thinking by pursuing clean or renewable resources like geothermal and the power generated by the ocean (e.g., wave and tidal);
- Some participants did not view wind power as a good option for clean energy, with one participant describing wind farms as blight on the landscape.
- There was interest in participating in biomass, and a suggestion that BC should be trying to capture some of the biomass market.

5.2.1.4 Prepare for Potentially Greater Demand

BC Hydro sought to understand First Nations' perspectives on the "Prepare for Potentially Greater Demand" set of draft recommended actions, identified as follows:

Recommended Action 9: Continue to work with LNG developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically:

Recommended Action 9a: Undertake work to maintain the earliest in-service date for a new 500 kV transmission line from Prince George to Terrace and Kitimat and from the Peace River to Prince George.

Recommended Action 9b: Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019-2020 time frame, should it be needed.

Recommended Action 10: Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

Recommended Action 11a: Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

Recommended Action 11b: Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

Several workshop participants expressed concern with the uncertainty associated with this set of draft recommended actions, and the capacity of First Nations to quickly consider and comment, if they could at all, on what might affect them in the future without enough information on, or understanding of, the recommended actions and their potential impacts. Several workshop participants indicated that silence from First Nations does not mean consent. There was also

significant concern, and even alarm, with a perceived lack of opportunities for First Nations in clean/renewable energy development among the recommended actions.

Feedback provided on the draft Recommended Action 9 relating to the North Coast and draft Recommended Action 10 relating to the Northeast was mixed, but a key theme was opposition to BC Hydro subsidizing the extension of the grid to serve industry.

Participants' views on pumped storage ranged from unfavourable to favourable, and a range of views were also offered on natural gas-fired generation.

The following section is a summary of comments and recommendations offered by First Nations in the regional workshops on the "Prepare for Potentially Greater Demand" set of recommended actions. For a more detailed summary of feedback by regional workshop, see **Appendix 12**.

5.2.1.4.1 Comments & Recommendations — Prepare for Potentially Greater Demand

North Coast (Recommended Action 9a and 9b)

- Concern was raised that participants were being asked to think really quickly about what might affect them in the future, and that it was tough to consider now what the effects of liquefied natural gas (LNG) might be.
- There was an interest in being consulted before adding the new 500 kV transmission line.
- There were concerns expressed about the potential impacts of transmission lines, including the effects of high voltage lines on health and on wildlife, as well as the effects of pesticide use, which it was felt should be banned altogether.

- There was a concern that BC Hydro might be subsidizing the extension of the grid to serve the liquefied natural gas (LNG) industry when that industry could produce its own electricity with natural gas.
- There was interest in the implications of the government's recent announcement to exempt gas used to power LNG facilities from the clean energy targets specified in the *Clean Energy Act*.
- There was concern that natural gas may be exempted for the LNG industry but not for others.
- The natural gas exemption for LNG was viewed as false and opportunistic.
- There was an interest in whether the power call associated with these recommended actions would be local to the North Coast or province-wide, as well as concern, in one region, about the ability of the grid to take on new interconnections from independent power producers.
- A desire was expressed for First Nations to support the aspirations of First Nations on the North Coast just the way they were showing support for whatever position First Nations local to the proposed Site C area took in relation to Site C.
- The procurement of new independent power appeared to be only needed to serve prospective LNG development, but for one participant's community the interest was in developing clean energy resources for the province in general, as part of the province-wide supply options for BC Hydro, not just for LNG.
- There was significant concern, and even alarm, with the lack of opportunities in the draft recommended actions and Integrated Resource Plan relating to First Nations participation in clean energy development, even though providing for opportunities for First Nations was mandated by the *Clean Energy Act*.
- It was felt that BC Hydro and First Nations should look at a "new relationship" way of acquiring power.

Northeast (Recommended Action 10)

- There was interest in learning more about other projects in the northeast (e.g., Montney basin).
- There was a view among some that it would make more sense for the gas industry in the northeast to use the gas for power rather than electricity.
- Some participants considered fracking a big environmental issue, and did not consider natural gas sustainable or renewable.

Pumped Storage (Recommended Action 11a)

- There was considerable interest in how pumped storage worked, how proven the technology was, where facilities might be sited in the province, how many facilities may be required to fill the peak capacity gap, and what the total footprint of these facilities might be.
- Pumped storage was described by one participant as “frightening.”
- There was a view that pumped storage seemed high cost with low return.
- It was suggested that BC Hydro work with First Nations to established pumped storage as a new First Nations industry.

Gas-Fired Generation (Recommended Action 11b)

- There was interest in knowing whether the change in government policy regarding the use of gas-fired generation to power liquefied natural gas (LNG) plants would lead the government to consider natural gas development opportunities on First Nations reserve lands.
- It was observed how clean and how quiet gas-fired facilities were, with no smell; however, there were concerns about the effects of greenhouse gas emissions from these facilities on the environment and on human health.
- There was a view that minimizing gas use locally to reduce greenhouse gases, while at the same time exporting it for use globally was inconsistent, and that if

it is to be considered “clean” in an export context (in relation to LNG), then it should be treated the same way in a domestic context.

- There was a view that using gas to export gas seemed ridiculous.
- Some concern was voiced about the use of natural gas to fill the demand/supply gap given its non-renewable and limited quantities.
- The impacts to First Nations that live where natural gas is extracted to benefit consumers in other areas was raised as an issue, citing a perceived parallel to Site C.

General to this Set of Recommended Actions

- It was difficult to comment on this set of recommended actions when there is so much uncertainty.
- It was felt that there was not enough information and/or understanding to provide feedback on this set of recommended actions, but that silence from First Nations does not mean “yes.”
- A perceived conflict was identified between BC Hydro’s objectives of wanting the domestic market to conserve, while at the same time considering electricity service to support entire industries.
- There was concern that developments in different industries in the north are occurring without a broad understanding of development across these industries.
- BC Hydro should use forward thinking to move beyond only proven technologies, and consider more alternative forms of energy production.

5.2.1.5 Additional Feedback

In addition to feedback on the draft recommended actions, participants at the workshops also provided feedback that was not specific to those actions, but that related in a more general way to the Integrated Resource Plan, particularly in terms of approach and assumptions. The key themes of additional feedback

revolved around concerns with BC Hydro's approach to consultation on the Integrated Resource Plan; First Nations' capacity to review, understand, and comment on the draft Integrated Resource Plan in the time available; the planning approach/perspective utilized by BC Hydro to develop the Integrated Resource Plan; opportunities/benefits for First Nations; inadequate/out-dated electricity service to First Nations communities; and other, more general observations/recommendations.

The following is a summary of the additional feedback BC Hydro heard during the 2012 workshops. For a more detailed summary of feedback by regional workshop, see **Appendix 12**.

5.2.1.5.1 Comments & Recommendations — Additional Feedback

Consultation

- The view that the workshop format did not constitute consultation was expressed, as was a concern about the upcoming provincial election, and specifically whether changes could be made to the Integrated Resource Plan by a new government after it has been approved.
- There was a view that for this to be considered legal consultation, comments should be attributed to specific First Nations.
- Participants described the workshops as information-sharing, not consultation, and were not sufficient for consultation.
- The view was expressed that the process had not been comprehensive, robust or flexible enough for First Nations to engage with BC Hydro on the development of the Integrated Resource Plan.
- The Integrated Resource Plan seemed so integral to BC Hydro, and yet First Nations were not being consulted and did not have input.

- There was appreciation expressed for the information presented in the workshop and the ability to vent, but it was felt that those assembled were having a discussion, not deciding.
- A participant expressed the view that the wider First Nations community is quite fragmented by individual First Nations going ahead with their own plans, and the participant found the workshop format helpful, as it provided an opportunity to hear what other First Nations were doing about energy planning in their communities.
- The August 13 deadline for receipt of written feedback was identified, by one participant, as limiting their community's ability to discuss the Integrated Resource Plan internally and respond to BC Hydro, as they were not set to meet again until September.
- The timeline suggested to a participant that BC Hydro was trying to speed through the Integrated Resource Plan process, and that this might work against creating a respectful balance between BC Hydro and First Nations.
- It was felt that there was new information on the Integrated Resource Plan not provided in 2011 (e.g., Revelstoke 6 and liquefied natural gas).
- There had been no communication on how First Nations input in the 2011 consultation had been incorporated into the draft Integrated Resource Plan, and that, while BC Hydro might see itself at the end of a process, First Nations felt that they had yet to be engaged in that process.
- There was interest in knowing or being advised by BC Hydro on how First Nations comments would be considered or not considered in the finalization of the draft Integrated Resource Plan.
- A lack of reconciliation at the planning stage was counter to direction from the courts on consultation, with specific reference to *West Moberly First Nations v. B.C.*

- In the context of a concern about the natural gas exemption for liquefied natural gas (LNG) industry, there was a comment that for dialogue between BC Hydro and Treaty 8 to be meaningful, there would need to be deep consultation on the *Clean Energy Act* and the gas industry, and that so far the consultation has been inadequate.
- There was a perception that the Integrated Resource Plan would affect First Nations unilaterally, and that First Nations would have to live with whatever BC Hydro develops.
- There was a perception that First Nations were being arbitrarily broken down into groups with the regional workshop format.

Capacity

- The lack of capacity of First Nations to review the draft Integrated Resources Plan, digest and develop informed understandings about it, then engage in a meaningful dialogue with BC Hydro, not to mention the costs associated with these activities, was cited as a barrier to the deep consultation that participants felt was necessary.
- Citing an experience with the Northeast Transmission Line process, there was a feeling that there was no indication that BC Hydro understands the capacity issues of First Nations and will be responsive to them.
- BC Hydro was asked to be patient with First Nations, as there were so many things coming at them that they had to think about, but unlike BC Hydro they did not have people whose job it was to think about these plans.
- There was a concern about the capacity of First Nations to review and respond to the volume of material on the Integrated Resource Plan.
- A participant stated that silence in response to BC Hydro's request for feedback on the recommended actions should not be understood as approval, as there was so much to consider and it would be hard to give feedback immediately.

- While it was acknowledged that First Nations have a need for electricity, there was a challenge identified in having the ability to be part of what was seen as a moving target, and a related interest in knowing who they had to meet with to influence BC Hydro.

Planning Approach/Perspective

- There was disappointment that the planning process did not proceed from a First Nations territorial view.
- It was felt that it was inappropriate for First Nations to comment on plans that might impact the territories of other First Nations, and that this limited their ability to provide feedback that proceeded from a province-wide view rather than a First Nations territory view.
- Related to the concern that the Integrated Resource Plan does not proceed from a First Nations territory view, there was a comment that most of Treaty 8 territory is not addressed in the draft Integrated Resource Plan, but the part that is addressed is taken for granted, with rights and title not considered.
- The draft Integrated Resource Plan has too much of a financial focus, with no mention of First Nations rights, title and interests.
- The province-wide approach of the Integrated Resource Plan did not respect the land use plan of a participant's community, leaving the participant with the impression that BC Hydro was going through First Nations land without asking.
- The province-wide approach excluded First Nations from negotiations on impacts to their lands.
- The province-wide approach does not address First Nations issues and objectives, in particular past grievances, revenue sharing, and opportunities to participate in energy development.
- What was meant by territorial-level planning was questioned by one participant, who said that some First Nations did not have a word for

ownership in their language, and that there were formerly no First Nations territories; First Nations went everywhere.

- A participant advised that their community would not pay attention to the Integrated Resource Plan because past grievances have not been addressed, and felt that BC Hydro should be able to negotiate past grievances.
- There was acknowledgement that BC Hydro is pursuing a number of good things to help First Nations relationships, but that the relationships BC Hydro has with First Nations are coloured by the negative history of those relationships, as well as the current approach of BC Hydro and the BC government on Site C.
- There was a belief that a regional approach to planning that considered local employment and development (including sharing revenue from energy development) may make more sense than a province-wide approach.
- Planning up from a First Nations territorial or regional perspective was understood as more conducive to incorporating First Nations concerns, while the non-territorial approach was seen as producing a draft Integrated Resource Plan based on economic imperatives.
- It was suggested that dedicated First Nations strategic planning sessions involving First Nations leaders were needed to pursue planning and development of energy with First Nations objectives in mind, and that the outcomes could then be filtered down to individual First Nations.
- A participant suggested that BC Hydro let First Nations be involved in discussions from the ground up, as there was a sense that the plans discussed during the workshop were already set and that First Nations were only being brought into the tail end.
- The perceived top-down approach to planning was not working, and it was suggested that a bottom-up or grassroots approach would be more effective and progressive.

- There was a concern that the Integrated Resource Plan was being described as a high-level, 20-year plan, but was very focused on specific projects like Site C, Revelstoke 6, and 500 kV transmission lines.
- It was felt that BC Hydro was not characterizing correctly the projects included in the Integrated Resource Plan, and that this could affect the ability of First Nations to respond appropriately when providing their feedback.
- It was felt that BC Hydro would face opposition when it comes to referrals, and it was suggested that the Integrated Resource Plan address this potential resistance and plan for it.
- There was a perception that the Integrated Resource Plan disregards sustainability, biodiversity, and First Nations rights.
- First Nations have their own environmental laws.
- There were several comments to the effect that First Nations saw no distinction between BC Hydro and the BC government.
- It was stated that there were some fundamental discrepancies between the objectives of First Nations and BC Hydro's mandate, and that BC Hydro should tell the BC government that it needs to listen to the contradictions.

Opportunities/Benefits

- Benefits around jobs are coming from BC Hydro and private companies, but not from government.
- The Integrated Resource Plan should involve supplying all First Nations with clean energy.
- Participants expressed a desire for economic development opportunities or advantages in relation to BC Hydro's activities.
- First Nations should be viewed by BC Hydro as partners, not consumers, and receive something back from BC Hydro for the development of First Nations resources, which BC Hydro uses to power the province.

- The people who own the land should be the ones that benefit from any kind of development.

Electricity Service to First Nations Communities

- While participants understood that the Integrated Resource Plan contained recommended actions relating to high voltage transmission lines, there was interest in whether BC Hydro was planning on upgrades to smaller distribution lines to communities.
- Inadequate power to First Nations communities as a result of decades' old (single-phase) technology was cited as a barrier to economic development and a significant issue for First Nations communities.
- There was a view that being connected to a grid by single-phase power is not really being connected to the grid at all, and that access to adequate electricity is needed to provide certainty and create opportunities for development, including attracting investment.
- Being at the end of the transmission line, a participant said their community is always last to be reconnected when power outages occur, and that there had been a significant number of recent outages in their area, with 6 in the last 2 months and 18 last year.

Other Comments

- BC Hydro was reminded to consider how everything is interconnected, about the importance of water as a lifeline that supported a traditional way of life, including hunting and fishing.
- It was important to take everything that was said during the workshops seriously, because when First Nations talk to BC Hydro, they talk about how their people survive.
- BC Hydro was asked to think about, in its planning, how BC Hydro improves its relationship with First Nations, not only in the big picture, but also in the day to day.

- Several participants did not want confidential agreements with BC Hydro, as they were seen to divide First Nations and create conflict.
- The Integrated Resource Plan should consider carbon emissions.
- Renewable energy should be looked at as a source of heating.
- BC should stop exporting electricity.

5.2.1.6 Attributed Comments

Participants in the regional workshops were advised by BC Hydro that the note-taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. There was only one request for a comment to be attributed during the workshops.

Chief Rita Matthew, Simpcw First Nation [Abbotsford]

The Simpcw First Nation said they wanted to be on record as stating that they recognized and respected First Nations jurisdictions and supported the concerns of those First Nations whose traditional territories may be directly impacted.

5.2.2 Written Input and Feedback from First Nations

BC Hydro received written comments from First Nations in three ways: the First Nations Input/Feedback Forms; reports from the BCFNEMC; and additional letters and emails received from First Nations, Tribal Councils, and First Nations Organizations.

The following sections detail the feedback received in the 2012 First Nations Feedback Forms. For details on 2011 written input, see Section 5.0 of the Interim Report included in this report at **Appendix 19**.

5.2.2.1 2012 First Nations Feedback Forms

Of the 117 workshop participants in 2012, 26 provided their feedback in the 2012 First Nations Feedback Form. This form asked respondents to indicate a level of agreement with each draft recommended action and the reason for the indicated level of agreement. Options for level of agreement were strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree. Responses are set out in the tables below, organized according to the four sets of draft recommended actions. Reasons for respondents’ level of agreement are reproduced in these tables verbatim. For a graphic representation of respondents’ level of agreement with each recommended action see **Appendix 20**.

5.2.2.1.1 Conserve More

The written feedback received on the Conserve More set of recommended actions is set out in Tables 5.2.2.1.1.1 through 5.2.2.1.1.3, below.

Table 5.2.2.1.1.1 Written Feedback on Conserve More Recommended Action 1a

Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Neither Agree or Disagree	They are not supporting any more energy efficient courses so how can this be so.

Integrated Resource Plan Appendix 7G

Canim Lake Band	Strongly Agree	Better to sue existing resources than to overextend.
Coldwater Band Council	Neither Agree or Disagree	Not aware of GWh - don't understand the terms.
Council of the Haida Nation	Strongly Agree	This is the purpose or objective. CHN Energy in cooperation with the Haida Gwaii Energy Committee (comprised of HG leadership) are in the process of developing a Demand Side Plan for all of Haida Gwaii with anticipation of partnering with BC Hydro & others
Dzawada'enuxz First Nation	Strongly Agree	Just an example, as we're not on grid. Currently our First Nations runs a diesel, working on hydro production; however we only currently charge 45/month whereas we are seriously compromising our operations overall by going into a huge deficit. If everyone conserved energy it would reduce costs of operation. Right now, people don't have an appreciation of conserving energy....I think they will if we do go with BC Hydro.
Gitanyow First Nation	Somewhat Agree	I don't believe this goal is attainable especially in the north. We need more industrial and commercial enterprises that will actually increase power requirements. I certainly believe in conservation and efficiency, I just think the targets are unattainable and BC Hydro should be supporting green energy alternatives for power production in the North. Preference should be given to First Nation proposals.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	We should be reducing our energy footprint. Offer large residential incentives, rate reduction or rebate.
High Bar	Strongly Agree	Less of a foot print.
Huu-ay-aht First Nation	Strongly Agree	People react to incentives, real ones. I believe one would have to have strong (dis) incentives for reducing demand. While negative incentives are likely more effective, it's not likely that the Province would agree to that, so positive incentives are a good start.
	Strongly Agree	First action is always to conserve before you invest in building more capacity. This will allow us to get more out of the new capacity you build.
Lhatko Dene Nation	Strongly Agree	I believe saving more energy would greatly reduce the demand on mother nature and give incentive to the younger generations to seek other forms of energy through education.
	Somewhat Agree	Conservation is always good but must be weighed against increased cost that probably gets passed on to the consumer.

Integrated Resource Plan Appendix 7G

Lheidli T'enneh First Nation	Strongly Agree	A penny saved is a penny earned. Best environmental consequences. DC current should be used to reduce line losses on long distance transmission lines.
		If there are ways to save energy they should be explored by having First Nations partners in future projects.
N'Quatqua	Somewhat Agree	<ul style="list-style-type: none"> -should be striving for maximum energy savings -for all BC Hydro conservation programs: Better & comprehensive marketing and advertising is needed. -conservation and efficiency programs should be implemented in all the difference sectors; business, industry, residential, commercial and schools, similar to DSM Option 5 -incentives to reduce energy should be offered only if high environmental standards or high-energy efficiency is obtained.
Nazko First Nation	Somewhat Agree	I applaud the foresight in identifying the need to conserve more energy, and increase the target, but I am still unclear HOW the conservation programs will take place and uncertain about any negative impacts of the conservation. I.e. financial costs to an already overburdened First Nations Housing program.
Office of the Wet'suwet'en	Somewhat Agree	What level or "quality of life" are First Nations going to have to adapt to?
Qualicum First Nation	Strongly Agree	
Quatsino First Nation	Somewhat Agree	It would have to have total buy-in from everyone in order for it to work.
Skeetchestn	Somewhat Disagree	Do not like unrealistic targets
St. Mary's Indian Band	Strongly Agree	"Low hanging fruit" and a sophisticated approach.
Tobacco Plains	Strongly Agree	I believe it is achievable.
Tsawout Band	Strongly Agree	If there is a greater demand it makes more sense.
Anonymous Campbell River	Somewhat agree	
Anonymous Prince George	Neither Agree or Disagree	Energy can be generation from some First Nation i.e.: Run of River.

Table 5.2.2.1.1.2 Written Feedback on Conserve More Recommended Action 1b

Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Neither agree or disagree	
Canim Lake Band	Neither agree or disagree	
Coldwater Band Council	Neither agree or disagree	
Council of the Haida Nation	Strongly Agree	Need for definition in relation to accommodation. Fossil fuel is overly used on the Haida Gwaii and adding to climate change & increase acid in our seas that causes shells and skeletons to soften, putting sea life at risk and consequently our culture and way of life at risk.
Dzawada'enuxz First Nation	Strongly Agree	Agree to give more incentives to get people to reduce.
Gitanyow First Nation	Neither agree or disagree	
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	Verify through scientific data acceptable to all stakeholders.
High Bar	Strongly Agree	More bang for your buck.
Huu-ay-aht First Nation	Strongly Agree	Yes! This will NEED political support though.....better information from smart meter aggregate data could help that long if science still influences politics
	Strongly Agree	Make it affordable. Reasonable/practical codes, rates, standards
Lhatko Dene Nation	Somewhat Agree	Always explore all your options i.e. IPPs participating for First Nations or options where our title and rights are not injected.
	Strongly Agree	Higher standards mean better quality in my views when we set the bar high for next generations to step up and try to do better.
Lheidli T'enneh First Nation	Somewhat Agree	Industrial rates should be increased. Time-of-day rates should only apply to industrial rates. Industrial customers should pay for new development, including Site C, natural gas fired construction/maintenance, and new

		transmission capacity.
	Strongly Agree	The levels of income for on-reserve community members is lower, overall, than -reserve community members; therefore, explore ways to address this through different rate options
N'Quatqua	Somewhat Agree	There should be stronger regulations in regards to major users.
Nazko First Nation	Somewhat Disagree	In looking at economic trends in BC, there is no doubt that the need for energy is increasing, so I am very unsure of how the process of saving and conserving energy will impact basic housing, and reluctant to provide reduced rate energy to large industrial customers, while low income homes and families are paying the full price.
Office of the Wet'suwet'en	Neither Agree or Disagree	
Qualicum First Nation	Strongly Agree	People need to see a viable solution.
Quatsino First Nation	Somewhat Agree	Exploration of options like smart-meters are causing at an average, twice the hydro bill.
Skeetchestn	Neither Agree or Disagree	
St. Mary's Indian Band	Strongly Agree	Does industry (business) require low corporate tax rates and low power rates etc., to operate in B.C? Government should look at our region as a business unit with current policies and tweak as needed to achieve society's wishes. We must be realistic, there is a cost to implement the clean air act and we should pay for it, start with industry. Low corporate tax and power rates are not sustainable.
Tobacco Plains	Somewhat Agree	Would focus on first achieving the 9800 target before trying to achieve additional targets unless an opportunity arises that makes sense to add to the target.
Tsawout Band	Strongly Agree	To meet the objectives of the 66% demand for the clean energy act.
Anonymous Campbell River Workshop	Somewhat Agree	Sounds good on paper, however, if regular consumers are getting any 'incentives' more information (PR material) is required. What are the benefits of residential consumers using less electricity? Savings on bill? Or, is it just a benefit to BC Hydro?
Anonymous Prince George Workshop	Neither Agree or Disagree	Who will be paying?

Table 5.2.2.1.1.3 Written Feedback on Conserve More Recommended Action 2

Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake		
Canim Lake Band	Strongly Agree	
Coldwater Band Council		
Council of the Haida Nation	Strongly Agree	Project or businesses at times use energy unnecessarily during day light that can be done any other time. Start with voluntary & overtime moving to regulated.
Dzawada'enuxw First Nation	Strongly Agree	Important that we all do our part in conserving.
Gitanyow First Nation	Strongly Agree	
Gitsegukla Band Office	Somewhat Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	Not bending to industry.
High Bar		
Huu-ay-aht First Nation	Somewhat Agree	People generally don't change their behaviour w/o an effective, real world incentive. There needs to be a monetary, political or social incentive to change
	Strongly Agree	Make it an opportunity in the marketplace. Encourage and identify good products - best practices. Voluntary programs if they can take off are very effective.
Lhatko Dene Nation	Strongly Agree	Don't waste, we are all taught this from our grandmothers.
	Somewhat Agree	I think you should put a cap on the amount of energy allowable to commercial and industrial customers within reason and fine them or charge them more for anything over
Lheidli T'enneh First Nation	Strongly Agree	Public knowledge of the costs and benefits of new technologies need to be enhanced.
	Somewhat Agree	We, the residents of this province should not be or continue to be

		the back-up plan to recover the cheaper rate shortfalls of the commercial and industrial customers and their rates. Commercial and industrial customers should be charged higher rates to produce the forecasted revenues for the province.
N'Quatqua	Somewhat Disagree	<p>Couldn't this shift the current peak periods to another time?</p> <p>-conservation programs should be mandatory! We need to encourage conservation now, especially in industry. Better standards and codes will ensure this, as well as beneficial incentives or discounts.</p> <p>-incentives to reduce energy should be offered only if they follow the standards or requirements.</p>
Nazko First Nation	Somewhat Agree	<p>I would like to see more incentives for low-income homes and families throughout the province. Perhaps based on income and family size.</p> <p>If there are incentives for consumption during peak period times, this will likely have little impact on savings for residential customers who eat, sleep, shower and clean their homes at regular times throughout the day. Commercial and industrial customers who work on rotating shifts will have the same difficulties in energy conservation.</p> <p>Incentives and education are the key to reducing energy consumption, and I am extremely pleased with the Low Income Incentive that BC Hydro recently introduced for on-reserve customers. It shows that BC Hydro is aware that older appliances are energy zappers, and that newer energy effective appliances help customers to reduce energy consumption in the long run. Too often First Nation customers are not able to afford the newer energy effective appliances.</p>
Office of the Wet'suwet'en	Strongly Agree	
Qualicum First Nation	Strongly Agree	There should be some kind of incentive to the consumer to do this, for example, some kind of saving on their bill as everyone will have the smart meter in.
Quatsino First Nation	Somewhat Agree	Has to have total buy-in from everyone across the board.
Skeetchestn	Strongly Agree	
St. Mary's Indian Band	Neither Agree or Disagree	This will take many years. By 2016, we need to be changing our habits. There must be monetary gain for most people to change.
Tobacco Plains	Strongly Agree	<p>Also need to look at conservation programs that are also beneficial to conserving other natural resources i.e.: water.</p> <p>Programs that offer high efficiency washing machines/dryers that would both reduce energy consumption but also reduce energy consumption but also reduce water use (which would also reduce energy use through the electricity used to pump the water.)</p>

Tsawout Band	Somewhat Agree	<p>The question arises on the problem of "new light bulbs". The expense of the new bulbs versus the old ones and the length of the life of the bulb. BC Hydro should work with the companies who produce the bulb to produce a better product.</p> <ul style="list-style-type: none"> - For timers for hot water tank and offers the customer some incentive - Buy back old fridge (more incentives) - Buy back old stove - I know some families that use their ranges to heat their homes during the winter, can there be some kind of incentive for cheaper ways to warm the home? (oil filled heaters). New ranges with over timers longer than 3-4 hours to automatically shutting down. Just a suggestion. "
	Strongly Agree	If they follow through with what they are saying.
Anonymous Campbell River Workshop	Somewhat Agree	Bottom line.what does it give/provide me, the consumer? Other than it's a 'good thing', WHY? What's in it for the consumer?
Anonymous Prince George Workshop	Somewhat Agree	A lot more work on how to do this.

5.2.2.1.2 Build and Reinvest More in Existing Assets

The written feedback received on the “Build and Reinvest More” set of recommended actions is set out in Table 5.2.2.1.2.1 through Table 5.2.2.2.1.5, below.

Table 5.2.2.1.2.1 – Written Feedback on Build and Reinvest More Recommended Action 3

Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown’s duty to consult and, where appropriate, accommodate Aboriginal Groups

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Neither Agree or Disagree	
Canim Lake Band	Neither Agree or Disagree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation	Somewhat Disagree	Do not have enough info to determine support e.g. First Nation accommodation and consultation. This is outside Haida Territories & not a matter for our consideration. The Aboriginal people that will be affected need to make this determination.
Dzawada’enux First Nation	Neither Agree or Disagree	Does not affect our First Nation
Gitanyow First Nation	Neither Agree or Disagree	This decision should remain with the First Nations impacted by the project.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Strongly Disagree	
High Bar	Neither Agree or Disagree	
Huu-ay-aht First Nation	Neither Agree or Disagree	Peace River First Nations!
	Strongly Agree	With the approval of the First Nations whose Territory(s) the dam is on.
Lhatko Dene Nation	Strongly Disagree	Hydro Electric dams devastate the environment and impact Title & Rights of First Nation’s. River valleys are the element of life for everything in the broader area. They provide water and feed for

		wildlife and people. Destroying land and life for greater creature comforts hundreds of miles away makes no sense.
	Strongly Agree	
Lheidli T'enneh First Nation	Strongly Disagree	<p>Before ""accommodating"" Aboriginal groups for Site C, BC Hydro should compensate Aboriginal groups across the province for previous development.</p> <p>People are terrible at cost estimates. The cost of this project will be much higher than estimated. Industry needs this power, so industry should par for the dam and new infrastructure.</p> <p>Using other methods of power for the Peace Valley has more value to the province for agriculture and recreation than it does a reservoir. .</p>
	Neither Agree or Disagree	BC Hydro must recognize the right and title of all the affected First Nations in the area in order to have those First Nations as partners. They should not be used to accommodate or receive some sort of short-term, small scale accommodation
N'Quatqua	Strongly Disagree	<p>This is stated as a 'recommendation' but it seems BC Hydro is already committed & relying on this project to go through. There are no contingency plans in this draft that would make up the input Site C would have. That is not encouraging.</p> <p>With climate change, we are already seeing different trends with water levels, run of rivers/dams may not be as productive or feasible in the long run.</p>
Nazko First Nation	Strongly Disagree	I am extremely concerned about the environmental impact of Site C. If the livelihoods of Aboriginal Groups are further impacted by this project. The outcome will not be positive for any of the population in BC.
Office of the Wet'suwet'en	Strongly Disagree	Environmental/First Nations criteria are not being met.
Qualicum First Nation	Neither Agree or Disagree	That is their traditional territory and the First Nations there need to be consulted.
Quatsino First Nation	Neither Agree or Disagree	Like many other First Nations groups, mine would not feel comfortable being consulted on a project that is not in our Territory.
Skeetchestn	Somewhat Disagree	Believe that there are devastating environmental and agricultural costs associated with this project not to mention the strenuous and well thought out objections of the local First Nations (Treaty 8)
St. Mary's Indian Band	Neither Agree or Disagree	Not our territory, need to consult with Chief and Council to determine a position. Will forward this on in the future.
Tobacco Plains	Somewhat Disagree	The cost to accommodate for the loss of land and its uses to the First Nations affected are too great. BC Hydro needs to look at alternatives such as wind power.
Tsawout Band	Strongly Agree	-projected job creation for First Nations

		-as long as they follow through with First Nations involvement in all the stages of the project.
Anonymous Campbell River	Neither Agree or Disagree	Defer to those First Nations whose territory Site C is located in.
Anonymous Prince George	Neither Agree or Disagree	This has to deal with local First Nations involved. Can't speak on another Nations Territory.

Table 5.2.2.1.2.2 – Written Feedback on Build and Reinvest More Recommended Action 4

Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake		
Canim Lake Band		Better to utilize existing infrastructure than to build new.
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation	Neither Agree or Disagree	Would need to know the overlaying potential first. If renewable energy & no addition carbon emissions.
Dzawada'enux First Nation	Somewhat Agree	Site is already in place
Gitanyow First Nation	Strongly Agree	Strongly agree to maximize the benefits of the assets you currently own.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	
High Bar	Strongly Agree	More bang for your buck.
Huu-ay-aht First Nation	Neither Agree or Disagree	Consult with local First Nations near Revelstoke.
	Strongly Agree	Get more out of what is already constructed.
Lhatko Dene Nation	Somewhat Agree	Use existing infrastructure wise upgrades rather than destroying more land and life. When a dam is built it is forever, there is no reclamation plan. Land and river that has been used for thousands

		of years no longer exists.
Lheidli T'enneh First Nation	Strongly Agree	Better utilization of existing facilities. No new impacts
	Neither Agree or Disagree	BC Hydro must recognize the right and title of all the affected First Nations in the area in order to have those First Nations as partners. They should not be used to accommodate or receive some sort of short-term, small scale accommodation.
N'Quatqua	Somewhat Disagree	Instead of building more facilities, BC should be looking at reinvesting & re-furbishing its existing facilities to ensure they are environmental efficient and meet the highest standards.
Nazko First Nation	Somewhat Agree	I am in favour of utilizing existing sites to increase capacity if the environmental assessments are positive.
Office of the Wet'suwet'en	Somewhat Agree	
Qualicum First Nation	Strongly Agree	Using something that is already there.
Quatsino First Nation	Neither Agree or Disagree	Like many other First Nations groups, mine would not feel comfortable being consulted on a project that is not in our Territory.
Skeetchestn		
St. Mary's Indian Band	Neither Agree or Disagree	Not our territory, need to consult with Chief and Council to determine a position. Will forward this on in the future.
Tobacco Plains	Strongly Agree	Exists and have the capacity but need to address issues of fish or lack of it - i.e.: ensure fish are able to get back and forth very easily.
Tsawout Band	Somewhat Agree	We feel the impact here on Vancouver island
	Somewhat Disagree	Wonder if this affects any First Nations who live downstream and their fisheries livelihood? Are they consulted. We do not live near Revelstoke so we cannot answer for them.
Anonymous Campbell River	Neither Agree or Disagree	Defer to those First Nations whose territory is affected.
Anonymous Prince George	Somewhat Disagree	BC Hydro needs to work with northern communities as they are the ones requiring extra energy.

Table 5.2.2.1.2.3 – Written Feedback on Build and Reinvest More Recommended Action 5

Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake		
Canim Lake Band	Strongly Agree	
Coldwater Band Council	Strongly Disagree	
Council of the Haida Nation		
Dzawada'enux First Nation	Somewhat Agree	Ensuring that all things are taking into consideration (at the forefront) such as; environmental impact, territory
Gitanyow First Nation	Strongly Agree	Need to tap existing green energy opportunities and work to balance line loads to accommodate best use of green energy, ROR IPPs and biomass options. Preference given to First Nations projects.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	
High Bar		
Huu-ay-aht First Nation	Strongly Agree	Continual improvement is required. This should always be an active program.
Lhatko Dene Nation	Somewhat Agree	How much do these studies cost? Does the end result justify the cost? Or does the consumer bear the cost on their bills?
	Strongly Agree	
Lheidli T'enneh First Nation	Somewhat Agree	As long as the costs and benefits make sense
	Somewhat Agree	In order to be efficient, this will help residents of BC to save money in the long term.
N'Quatqua	Somewhat Agree	An inventory should be done on all facilities and components that are draining the system, and measure should be taken to fix them. Invest in & encourage new technologies that are fully environmentally sound, OR implement proven technologies into

Integrated Resource Plan Appendix 7G

		current and new infrastructures, e.g. All buildings have a solar component.
Nazko First Nation	Strongly Agree	Yes, this recommendation makes sense to me 100%
Office of the Wet'suwet'en	Strongly Agree	
Qualicum First Nation	Strongly Agree	
Quatsino First Nation	Neither Agree or Disagree	It has to be done regardless.
Skeetchestn	Neither Agree or Disagree	Don't know what the implications of this project are - I know residents in the area worry about the variable water level in the reservoir/lake.
St. Mary's Indian Band	Somewhat Agree	With the inclusion of First Nations as equal partners in all new opportunities as a mandatory policy. These opportunities are in line with First Nations values, this is again "low hanging fruit".
Tobacco Plains	Somewhat Agree	Sometimes "cost-effective" shouldn't be the only driver of whether a project goes ahead.
Tsawout Band	Strongly Agree	If they follow through on the environmental impact
Anonymous Campbell River	Somewhat Agree	
Anonymous Prince George	Neither Agree or Disagree	No Comment

Table 5.2.2.1.2.4 – Written Feedback on Build and Reinvest More Recommended Action 6

Fill the short term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Disagree	The Burns Lake Band had worked on a CO-GEN Plant proposal for 6 years and only to get squashed, we spent hundreds of thousands of dollars out of our own pocket for this project only to get rejected.
Canim Lake Band	Neither Agree or Disagree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation		Columbia River Treaty-Springs/Chinook returns extremely low-killer whale suffering-Columbia River needs to diminish dams not expand. Burrard Thermal -If it reduces fossil fuel use & carbon emissions
Dzawada'enuxz First Nation	Somewhat Agree	They're already in place however I'm not entirely familiar as to the impacts.
Gitanyow First Nation	Neither Agree or Disagree	These solutions should not interfere with or delay First Nations IPPs.
Gitsegukla Band Office	Somewhat Agree	
Gitxsan Hereditary Chiefs	Neither Agree or Disagree	
High Bar		
Huu-ay-aht First Nation	Somewhat Agree	Gaps are gaps, do what is necessary.
	Strongly Agree	Approach makes sense. Diversity is good.
Lhatko Dene Nation	Neither Agree or Disagree	
	Somewhat Agree	
Lheidli T'enneh First Nation	Strongly Agree	
	Somewhat Agree	Be proactive with those First Nations that have shared territory within this existing infrastructure.

N'Quatqua	Somewhat Disagree	If energy savings programs are implemented and enforced now, then the short term gap should be reduced, taking the need out of these particular suggestions. Burrard is already cited with concerns regarding its clean component.
Nazko First Nation	Neither Agree or Disagree	I require more information on this recommendation in order to respond.
Office of the Wet'suwet'en	Somewhat Agree	
Qualicum First Nation	Strongly Agree	
Quatsino First Nation	Neither Agree or Disagree	A treaty that we had no say in? I am unaware of the contents of this treaty but if it is buying back power from the Americans to the detriment of Canadians then I disagree.
Skeetchestn	Somewhat Agree	
St. Mary's Indian Band	Neither Agree or Disagree	Comments to come via email.
Tobacco Plains	Somewhat Agree	Why wouldn't the CRT come first? New markets need to be developed - even if they are not ""cost-effective"" - can't rely on Site C and pumped storage. The damage to land and wildlife has been damaged enough.
Tsawout Band	Strongly Agree	Necessary to meet the demand.
Anonymous Campbell River	Neither Agree or Disagree	Defer to other First Nations whose territory is affected.
Anonymous Prince George	Somewhat Disagree	Have to use Northern resources for Northern demand.

Table 5.2.2.1.2.5 – Written Feedback on Buy & Reinvest More Recommended Action 7

Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Agree	Yes that proposal is pretty straight forward.
Canim Lake Band	Somewhat Agree	
Coldwater Band Council	Somewhat Disagree	

Integrated Resource Plan Appendix 7G

Council of the Haida Nation	Neither Agree or Disagree	No resolution on Site C. Aboriginal people in the area whose culture and ancient ways of being must be 1 st consideration.
Dzawada'enuxw First Nation	Neither Agree or Disagree	Don't know enough about it and it's impacts.
Gitanyow First Nation	Strongly Agree	With First Nations consultation.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	
High Bar	Neither Agree or Disagree	
Huu-ay-aht First Nation	Strongly Agree	Extra capacity is nearly always good as an investment.
	Neither Agree or Disagree	
Lhatko Dene Nation	Somewhat Agree	Does the cost of power go up as a result?
Lheidli T'enneh First Nation	Somewhat Agree	Use DC power. Remain within the existing corridor. Buying new and existing lines would be nice.
	Somewhat Agree	As BC Hydro has done with the NTL, BC Hydro must also have a similar discussion with the First Nations around long-term Impact Benefit Agreements that will be affected for this future project
N'Quatqua	Somewhat Disagree	If LNG is driving this predicted increase to the north coast, it is not worth it. LNG are major facilities and the rest of consumers, not to mention the environment suffers. If there is a power shortage, it is due to facilities and industries like these.
Nazko First Nation	Somewhat Disagree	At the workshop I heard some strong comments from Aboriginal groups who are opposed to this. I would like more information regarding this item before commenting.
Office of the Wet'suwet'en	Somewhat Disagree	First Nations <u>must</u> be in full support first!
Qualicum First Nation		Consulting First Nations whose traditional land it sits on.
Quatsino First Nation	Neither Agree or Disagree	Not in Quatsino First Nation territory therefore uncomfortable commenting on it.
Skeetchestn	Neither Agree or Disagree	Do not know enough about this project to comment.

Integrated Resource Plan Appendix 7G

St. Mary's Indian Band	Neither Agree or Disagree	Would hope global demand for minerals in the short term is being considered.
Tobacco Plains	Somewhat Disagree	Also need to look at improving/building transmission line in the southeast corner of BC particularly close to the US Boundary. This area also require 3 phase power.
Tsawout Band	Neither Agree or Disagree	As to the electro-magnetic field? When reinforced will there be a larger magnetic field?
	Somewhat Agree	<ul style="list-style-type: none"> - Line to be reinforced - Unnecessary environmental impacts and cost in the event transmission need does not materialize - Potential opportunities & ability to avoid multiple transmission lines.
Anonymous Campbell River	Neither Agree or Disagree	Defer to other First Nations whose territory is affected.
Anonymous Prince George	Strongly Disagree	Local run of river projects can supply demand.

5.2.2.1.3 Buy More Made-in-BC Power

The written feedback received on the “Buy More” recommended action is set out in Table 5.2.2.1.3.1, below.

Table 5.2.2.1.3.1 – Written Feedback on Buy More Recommended Action 8

Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2016–2018 time period.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake		
Canim Lake Band	Strongly Agree	It will not only supply energy, but bolster the economic development of small energy producers, and their communities.
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation	Strongly Agree	First Nation investments in future. Yes! Adequate funds need to be made available. This contributes to providing future generations with a healthy earth & energy needs.
Dzawada’enuxw First Nation	Strongly Agree	Provide opportunities for IPP - economic development for many First Nations. Clean energy options. Only problem is limitations in Transmission.
Gitanyow First Nation	Strongly Agree	Give priority to First Nations backed projects. Remove disincentives such as line loss location penalties. Include location incentives for the North Coast region where excessive energy requirement are being developed, i.e. similar to current policy of Vancouver Island pricing policy.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Agree	
High Bar	Strongly Agree	Hope for less of a foot print.
Huu-ay-aht First Nation	Strongly Agree	Up to 2000 GW/H? Why not more and resell as export?
	Strongly Agree	Continue to develop and improve on clean energy projects. Transmission issues-connection and beefing the lines to handle the projects- BC Hydro needs to provide resources to help in this process.
Lhatko Dene	Somewhat Agree	Start the investment in clean energy now not five years from now.

Nation		
	Somewhat Agree	If First Nations could get the education from Hydro and be given ideas on how to come up with ideas and become partners this would be good.
Lheidli T'enneh First Nation	Somewhat Agree	BC hydro needs to include incentives for IPPs that have First Nations support. We are being swamped by wind power investigative use permit applications (15 different projects thus far) and we would like assurances that BC Hydro requires proponents to make equity and or royalty arrangements with First Nations, as well as opportunities for construction. BC Hydro must utilize First Nations projects and contractors to meet project objectives and have the political will to do so.
	Somewhat Agree	
N'Quatqua	Somewhat Disagree	The term clean energy needs to be ratified. LNG or gas powered facilities should not fall under 'clean energy'. Solar is clean energy and should be further investigated.
Nazko First Nation	Somewhat Disagree	I would like to know more about the amount of energy currently being sold out of Province, to the US and the cost of delivering this power to purchasers before determining if new options are required. For instance, if we are selling at a higher cost than what customers are currently paying.... In looking at future demands, it is of note that First Nations populations are growing at an increasingly greater rate than non-native populations.
Office of the Wet'suwet'en	Strongly Agree	Makes it easier for IPPs to become a part of the power grid.
Qualicum First Nation	Somewhat Agree	
Quatsino First Nation	Neither Agree or Disagree	As long as it's not at a huge cost to consumers.
Skeetchestn	Strongly Agree	As long as natural gas is included, this is critical.
St. Mary's Indian Band	Somewhat Agree	Allow First Nations to lead/participate in developing these opportunities. Need to ask ourselves if current rates are high enough to support this. Have the courage to increase rates.
Tobacco Plains	Strongly Agree	As per comment above - opportunity to develop energy through wind power in the Southeast corner of BC, but there are no transmission lines to transmit.
Tsawout Band	Somewhat Agree	- Projects should be given a chance to develop - Clean or renewable energy in First Nations and rural communities

Anonymous Campbell River	Somewhat Agree	Depends on Location.
Anonymous Prince George	Somewhat Agree	Has to be sustainable. Don't want gas and that produces acid rain.

5.2.2.1.4 Prepare for Potentially Greater Demand

The written feedback received on the Prepare for Potentially Greater Demand set of recommended actions is set out in Table 5.2.2.1.4.1 through 5.2.2.1.4.5, below.

Table 5.2.2.1.4.1 – Written Feedback on Prepare for Potentially Greater Demand Recommended Action 9a

Continue to work with LNG [Liquefied Natural Gas] developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically: Undertake work to maintain the earliest in-service date for a new 500-kv transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Agree	
Canim Lake Band	Neither Agree or Disagree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation		Lowest fossil fuel & carbon emissions.
Dzawada'enuxw First Nation	Somewhat Disagree	They should provide their own energy. Bottom line, not in favour of activity on North Coast.
Gitanyow First Nation	Somewhat Agree	Strongly feel that natural gas should only be used as a back-up to true green energy producing. Allowing that option without this stipulation would kill all development on current and future green energy projects until there is a change in natural gas pricing.
Gitsegukla Band Office	Somewhat Agree	
Gitxsan Hereditary Chiefs	Somewhat Disagree	

High Bar		
Huu-ay-aht First Nation	Strongly Agree	Capacity = good; but consult with First Nations along the way..
	Neither Agree or Disagree	Need more information
Lhatko Dene Nation	Somewhat Agree	As long as BC Hydro and LNG producers recognize the title and rights of these First Nations affected by this type of development in their traditional territories..
	Somewhat Agree	If you tailor the work for First Nations then I say go for it
Lheidli T'enneh First Nation	Somewhat Agree	Investigate using DC power before construction.
	Somewhat Agree	At the concept stage, involve First Nations as partners, in the process; otherwise there will be problems of all sorts, especially if they are not involved at the earliest stages of future projects.
N'Quatqua	Strongly Disagree	LNG is not an environmentally sound or energy efficient and should not be supported
Nazko First Nation	Neither Agree or Disagree	Require more information from local Aboriginal groups regarding impact of this recommendation.
Office of the Wet'suwet'en	Somewhat Disagree	Far too many environmental/First Nations issues. Longer time lines are needed.
Qualicum First Nation	Neither Agree or Disagree	How will this impact the First Nation territory that these companies will develop in?
Quatsino First Nation	Neither Agree or Disagree	As long as it's not at a huge cost to consumers.
Skeetchestn	Strongly Agree	
St. Mary's Indian Band	Somewhat Agree	
Tobacco Plains	Neither Agree or Disagree	
Tsawout Band	Strongly Agree	To follow basic corridor? new? If it follows corridor it seems a lot more sensible. (no more trees cut down)
	Somewhat Agree	-potential job creation (priority to First Nations) -keep looking at the range of options -keep energy rates affordable for families, communities, First Nations communities and industry
Anonymous Campbell River	Neither Agree or Disagree	Defer to other First Nations whose territory is affected.

Anonymous Prince George	Strongly Disagree	Not sustainable.
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Table 5.2.2.1.4.2 – Written Feedback on Prepare for Potentially Greater Demand Recommended Action 9b

Continue to work with LNG [Liquefied Natural Gas] developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically: Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019–2020 time frame, should it be needed.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Agree	
Canim Lake Band	Somewhat Agree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation		Strongly support renewable energy development throughout BC & Canada = significant reduction of fossil fuel use and carbon emission reduction. Regulations requiring industry to reinvest in technology to reduce risk & carbon emissions.
Dzawada'enuxw First Nation	Somewhat Disagree	Not true clean energy - other options should be explored.
Gitanyow First Nation	Strongly Agree	
Gitsegukla Band Office	Neither Agree or Disagree	
Gitxsan Hereditary Chiefs	Somewhat Disagree	
High Bar		
Huu-ay-aht First Nation	Strongly Agree	Energy security/certainty matters..
	Neither Agree or Disagree	Need more information
Lhatko Dene Nation	Neither Agree or Disagree	
Lheidli T'enneh First Nation	Somewhat Agree	Natural gas generation should be across the province, where the demand is. Users of electricity should suffer the consequences, instead of constantly seeking to expand production from remote

		areas. Natural gas generation allows us to pass on the cost of electricity to industry. The costs of other developments are spread among the public. LNG will be used for electrical generation anyway, so natural gas is carbon-neutral unless other countries have more efficient technology..
	Somewhat Agree	BC Hydro needs to have the political will to utilize First Nations projects to meet the needs of capacity for electricity
N'Quatqua	Somewhat Disagree	If procurement options are accepted, then First Nations & Public should be consulted on each option and the design. All facilities should meet the highest environmental standards. Gas fired generation back up is a contradiction to clean energy.
Nazko First Nation	Neither Agree or Disagree	Require further information to comment.
Office of the Wet'suwet'en	Somewhat Disagree	Access issues.
Qualicum First Nation	Somewhat Agree	
Quatsino First Nation	Neither Agree or Disagree	As long as it's not at a huge cost to consumers.
Skeetchestn	Somewhat Agree	
St. Mary's Indian Band	Neither Agree or Disagree	Don't know
Tobacco Plains		Kitimat; Devil's Channel; Shell not factored in.
Tsawout Band	Somewhat Agree	Keep energy rates affordable for families, communities, First Nations communities and industry.
Anonymous Campbell River	Somewhat Agree	Defer to First Nations whose territory is affected
Anonymous Prince George	Strongly Disagree	Not sustainable. GHGs.

Table 5.2.2.1.4.3 – Written Feedback on Prepare for Potentially Greater Demand Recommended Action 10

Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Agree	
Canim Lake Band	Somewhat Agree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation	Somewhat Disagree	Natural gas is not a clean energy and the extraction has potential environmental impacts. Monitoring & studies is not enough. Third party compliance & enforcement must be mandatory with hefty fines & penalties.
Dzawada'enuxz First Nation	Somewhat Disagree	Not true clean energy - other options should be explored.
Gitanyow First Nation		Strongly feel that natural gas should only be used as a back-up to true green energy producing. Allowing that option without this stipulation would kill all development on current and future green energy projects until there is a change in natural gas pricing. Natural Gas cannot create an unfair advantage to true renewable green energy options. First Nations value this option as potential economic development and revenue.
Gitsegukla Band Office	Somewhat Agree	
Gitxsan Hereditary Chiefs	Neither Agree or Disagree	
High Bar	Neither Agree or Disagree	
Huu-ay-aht First Nation	Somewhat Agree	Local, gas-fired generation will be a difficult sell.
	Neither Agree or Disagree	Need more information.
Lhatko Dene Nation	Neither Agree or Disagree	Recognize Title & Rights. Consultation & Accommodation
Lheidli T'enneh First Nation	Somewhat Agree	Make industry pay for new facilities and infrastructure. Raise the industrial rate to pay for BC Hydro's debt..

Integrated Resource Plan Appendix 7G

	Somewhat Agree	We all know the potential of the area is huge and Horne River and Montney Basins will produce gas for years. BC Hydro must take a more proactive approach with affected First Nations in these areas, along with power line projects. BC Hydro needs to have affected First Nations at the table at the earliest stages of development
N'Quatqua	Strongly Disagree	LNG projects should not be supported.
Nazko First Nation	Neither Agree or Disagree	More information required to comment.
Office of the Wet'suwet'en	Neither Agree or Disagree	
Qualicum First Nation	Somewhat Agree	
Quatsino First Nation	Neither Agree or Disagree	As long as it's not at a huge cost to consumers.
Skeetchestn	Somewhat Agree	Natural gas should be an option throughout the project.
St. Mary's Indian Band	Somewhat Agree	It's just good planning.
Tobacco Plains	Somewhat Agree	But also need to look at Southeast corner of BC as well in terms of new supply through wind power and creation of transmission lines.
Tsawout Band	Somewhat Agree	As long as they follow through on reducing greenhouse gasses.
	Neither Agree or Disagree	
Anonymous Campbell River	Somewhat Agree	
Anonymous Prince George	Strongly Disagree	

Table 5.2.2.1.4.4 – Written Feedback on Prepare for Potentially Greater Demand Recommended Action 11a

Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Strongly Agree	
Canim Lake Band	Strongly Agree	
Coldwater Band Council	Neither Agree or Disagree	
Council of the Haida Nation	Strongly Agree	Great stuff. Yes! with meaningful Aboriginal participation.
Dzawada'enuxz First Nation	Somewhat Agree	Sounds a bit counterproductive, however needs to be explored more along similar options.
Gitanyow First Nation	Neither Agree or Disagree	It's a net loss so other options should be explored first. Preference again to First Nations green energy projects. Biomass is an alternative that provides firm power and could be made into an incentive to provide time of day requirements that would give the same results.
Gitsegukla Band Office	Strongly Agree	
Gitxsan Hereditary Chiefs	Somewhat Disagree	
High Bar	Strongly Agree	Good out of box thinking.
Huu-ay-aht First Nation	Somewhat Agree	If I knew more about the process and costs / benefits, I'd be more certain.
	Neither Agree or Disagree	Need more information.
Lhatko Dene Nation	Somewhat Agree	Finding a storage capacity would be a good thing for the peak periods but wouldn't that just be like giant batteries that could be potential environmental hazards?
Lheidli T'enneh First Nation	Somewhat Agree	If this will maintain the level of electricity production, so be it.
	Somewhat Disagree	The environmental assessment of the reservoirs will take too long. Too big of a footprint. Liability insurance costs will be prohibitive. Investigative compressed air storage.

N'Quatqua	Strongly Disagree	Pumped storage is not efficient. It if requires more energy than it creates, this option needs a better design. However on site power production is a good direction.
Nazko First Nation	Somewhat Agree	Yes, industry needs to be involved in future planning, however it is imperative that Aboriginal groups be more involved in the consulting process, particularly as industrial and economic growth impacts the livelihood of First Nations' peoples throughout the Province.
Office of the Wet'suwet'en	Neither Agree or Disagree	
Qualicum First Nation	Somewhat Agree	
Quatsino First Nation	Strongly Agree	It's a good idea.
Skeetchestn	Strongly Agree	
St. Mary's Indian Band	Strongly Agree	Good idea, can you use solar panels to provide power to pumps?
Tobacco Plains	Strongly Disagree	Work with First Nations and First Nations' Industry (Mica - Ktunaxa). Enough land, wildlife and humans have been impacted by BC Hydro's existing reservoirs.
Tsawout Band	Somewhat Agree	Where are these additional capacity resources?
Anonymous Campbell River	Somewhat Agree	
Anonymous Prince George	Somewhat Agree	Explore other options.

Table 5.2.2.1.4.5 – Written Feedback on Prepare for Potentially Greater Demand Recommended Action 11b

Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

First Nation	Agreement Level	Agreement Level Reasons
Burns Lake	Somewhat Agree	It is a good recommendation but needs follow through.
Canim Lake Band	Strongly Agree	
Coldwater Band Council	Somewhat Agree	
Council of the Haida Nation	Somewhat Disagree	Need more info in relation to environmental consultation and accommodation. Does not take into consideration First Nation values. (Strongly Disagree marked here) Reliance on industry only is dangerous as revealed in past forest & fisheries management. Industry, BC Hydro & affected First Nations need to talk at same table at same time.
Dzawada'enuxz First Nation	Somewhat Disagree	Produces GHG – should be last option
Gitanyow First Nation	Somewhat Disagree	Not at the expense of green energy
Gitsegukla Band Office	Somewhat Agree	
Gitxsan Hereditary Chiefs	Somewhat Disagree	
High Bar		
Huu-ay-aht First Nation	Strongly Agree	It would be much better to power liquefaction via clean energy, so I'm in support here..
	Neither Agree or Disagree	Need more information, especially on the air pollution question also the impact on water with shale natural gas
Lhatko Dene Nation	Somewhat Agree	If the world is trying to reduce emissions by using more electronic equipment instead and the plants are putting out mega tons aren't they burning all the emissions.
		From BC Hydro's perspective, this seems like a clean source of energy because things like LNG don't destroy the environment in the case of pipeline labs. But let's be mindful of the impact of extracting LNG from the ground. Exploration and development causes a big impact on the environment. Drilling and development

		of gas wells impact water tables and the landscapes. The pipelines are built to move the resources to a central location where it is processed and then put into another pipeline to be moved to the consumer.
Lheidli T'enneh First Nation	Somewhat Agree	Power source close to demand. Industry can build facilities themselves, no public subsidy. Quick construction. Need more information on emissions.
	Neither Agree or Disagree	BC Hydro must look at ways of how to deal with emissions more effectively. BC Hydro already recognizes that GHGs have an effect on global warming, so they must continue to find ways of dealing with GHGs.
N'Quatqua	Strongly Disagree	There are better and more efficient technologies & options that should be considered.
Nazko First Nation	Somewhat Agree	BC Hydro must work with all sectors, not just industry. I recommend having more First Nations input and education directly with community members. Regional workshops with more one to one involvement works best with Aboriginal groups and people.
Office of the Wet'suwet'en	Somewhat Disagree	First Nations' issues need to be addressed first.
Qualicum First Nation	Somewhat Agree	
Quatsino First Nation	Neither Agree or Disagree	This seems.....unsure.
Skeetchestn	Strongly Agree	Believe this is critical and encourage research on emission capture.
St. Mary's Indian Band	Neither Agree or Disagree	Not sure this is realistic given Sumas gas plant was opposed.
Tobacco Plains	Somewhat Disagree	BC Hydro needs to look at alternatives such as wind power and set a sustainable target then look at how to achieve that target.
Tsawout Band	Somewhat Agree	For contingency planning BC Hydro must look beyond the base plan recommended actions and address what if growth is every greater than expected or other resources don't come online when expected.
Anonymous Campbell River	Somewhat Agree	
Anonymous Prince George	Strongly Disagree	Just don't support any gas energy development.

5.2.2.1.5 Additional Feedback

Participants were invited to provide additional written feedback not specific to the recommended actions, as well as how they wished to be engaged in BC Hydro’s 5-10 year activities. This additional feedback is set out verbatim in Table 5.2.2.1.5.1 and 5.2.2.1.5.2, below.

Table 5.2.2.1.5.1 – Additional Written Feedback

First Nation	Feedback
Coldwater Band Council	Treaties in the area - Are there any yet at Site C. Electricity is a big demand on all levels, large amounts are being consumed each year by BC, but transparency is one of the most important things which needs to be shown by BC Hydro. Visual learners need the whole picture not just a dot on the map. What impacts will be looked at including city, town, wildlife, First Nations feed, drainage, salmon etc. Water drains low high through grass ranges. Cattle, horses, ranches. Consent by Treaty 8.
Gitanow First Nation	Given current natural gas pricing power production costs would be @ 70-80/MwH. Allowing unrestricted production of natural gas fired power generation would kill all green energy development in the province. Gas prices will increase over time and is a huge unknown aside from the unsustainable and GHG impacts. This would have the effect of setting back green energy development in the province for years and cause all capital investments to leave causing great harm to First Nations' who support and rely on green energy opportunities for their communities.
Gitxsan Hereditary Chiefs	It is not useful about being future oriented without listing pros and cons about supporting one way or another. You are seeking blind input which isn't verifiable.
Huu-ay-aht First Nation	Good facilitation of this session.
Lheidli T'enneh First Nation	100% of the power generation in this province comes from First Nations land. First Nations should be paid royalties from existing and future development. First Nations have not been adequately compensated for previous developments. BC Hydro must ensure that new development comes with proper compensation. We need help staking tenures for IPPs, why can't First Nations own these projects.
	When engaging First Nations project development, do not use a cookie-cutter approach when developing Impact Benefit Agreements, Procurement Opportunities, Contracts, Employment and Training Opportunities. BC Hydro should utilize its network with the Provincial and Federal governments and its ties to the mining, oil and gas industries to address potential costs of developing Impact Benefit Agreements.
N'Quatqua	It is unfortunate that the only options provided are not fully environmentally friendly or cannot provide effective energy efficiency. In this modern age of technology, BC Hydro should strive to be a leader in energy production, and implement technologies that would not sacrifice the environment.
Nazko First	I suggest hiring First Nations consultants to facilitate several regional workshops throughout the

Nation	province over the next year, who will compile the feedback and present a full report at an "Energy Convention" with invitations to all provincial First Nations that will allow everyone to share and plan for future energy requirements.
St. Mary's Indian Band	Recent midterm timber supply review indicates lumber mills will be shutting down. Has this energy user(s) been considered in the energy demand forecasting?

Table 5.2.2.1.5.2 – Written Feedback on Being Engaged in BC Hydro's 5-10 Year Activities

First Nation	Feedback
Burns Lake	There is so much going on in the north here it is hard to predict what will go through and what won't. All need environmental assessments done, which can squash a project pretty quick. A lot of them drag on for years also.
Canim Lake Band	Talk to First Nations at the beginning, not when the document is already half completed.
Coldwater Band Council	Include us in all areas, projects, investments, planning, land use, decisions. "Transparency"
Council of the Haida Nation	Gov - Gov with Council of the Haida Nation
Dzawada'enuxw First Nation	This meeting has been a good process. Good information and feedback.
Gitsegukla Band Office	Create jobs and training for our First Nations people.
Huu-ay-aht First Nation	Provide communication materials/information campaigns outlining the real incentives/disincentives for conservation. Streamline process and communication line to/from First Nations. Consulted to the Nation and its development corporation and personally via email.....information related to the recommendations and next step on projects. Information related to environmental impacts - water, acid(?), fish and wildlife.
Lhatko Dene Nation	Workshops like this are good, but face to face in a timely matter is way better.
Lheidli T'enneh First Nation	Engage First Nations at the concept stage of any projects, if BC Hydro doesn't do this, then it would be of no benefit to anyone. BC Hydro must have the political will to pro-actively work with First Nations for current and future projects.
N'Quatqua	An annual Report?
Nazko First Nation	I would like to see more regional workshops with Aboriginal facilitators going directly to communities to provide information workshops where First Nations communities could provide feedback in a real consultation process.

Office of the Wet'suwet'en	Funding is needed for First Nations participation.
Quatsino First Nation	Locally.
Skeetchestn	I think the workshop format worked well.
St. Mary's Indian Band	Meet with reps from Ktunaxa Nation Council and 4 member bands,
Tobacco Plains	Sessions such as this would be very useful.
Tsawout Band	Locally.
Anonymous Campbell River	Regular, ongoing CONSULTATION with Chief and Council and Senior Staff to ensure BC Hydro 'plans' are in line with our plans and ensure our Aboriginal Rights and Title are not jeopardized.
Anonymous Prince George	Consult locally at community gatherings.

5.2.2.2 Additional Written Feedback from First Nations

In addition to the First Nations Feedback Forms, two letters and one email from First Nations were received by BC Hydro containing additional feedback about the draft Integrated Resource Plan. These can be found at **Appendix 18**.

5.2.3 BC First Nations Energy and Mining Council Feedback

The BCFNEMC provided BC Hydro with their written feedback on the draft Integrated Resource Plan. As was the case in 2011, the 2012 feedback from the BCFNEMC has been provided in two separate documents, one relating to their involvement in the First Nations regional workshops, and the other relating to their involvement in the Technical Advisory Committee.

In the following sections, the key comments and recommendations provided by the BCFNEMC are set out verbatim as they appear in the 2012-dated reports, which are attached as **(Appendix 16) Workshops** and **(Appendix 17) Technical Advisory Committee**. For the two reports provided by BCFNEMC in 2011, see the same appendices.

5.2.3.1 BCFNEMC Regional Workshop Comments and Recommendations

The verbatim feedback of the BCFNEMC, based on participation in the regional workshops, addresses all recommended actions, as set out below. For the full report see (**Appendix 16**).

Please note that the recommended action numbers used in the BCFNEMC report on the workshops are based on those used in the 2012 Discussion Guide (**Appendix 10**) and regional workshop presentation materials (**Appendix 8**) and referenced elsewhere in this consultation report. These numbers do not correspond entirely with numbering used in the BCFNEMC report prepared as a result of its involvement in the Technical Advisory Committee (see Section 5.2.3.2), which are based on the numbering used in Chapter 9 of the draft Integrated Resource Plan.

5.2.3.1.1 *Conserve More*

Based on participation in the regional workshops in 2012, the BCFNEMC has reported the following comments related to the “Conserve More” set of recommended actions:

Recommended Action 1a and 1b

- FNEMC supports this recommendation provided that implementation of the various measures is based on incentives rather than penalties, that program design takes into account the circumstances of rural and off-grid FN communities, recognizes the need for business and economic development on FN lands, and ensures accessibility for lower and fixed income people – a too common circumstance for many FN members. FNs should be directly engaged in program design and delivery.

Recommended Action 2

- FNEMC supports this recommendation subject to the same caveats noted above. We would also comment, as a number of participants did during the

regional workshops, that there would be FN support for additional and mandatory measures such as time-of-use rates, so long as those were not punitive to residential and rural users.

5.2.3.1.2 Build and Reinvest More in Existing Assets

Based on participation in the regional workshops in 2012, the BCFNEMC has reported the following comments related to the “Build and Reinvest More” set of recommended actions:

Recommended Actions 3, 4, and 5

- FNEMC does not support inclusion at this time of Site C. FNEMC and FNs have expressed concern since inception of the BCUC Section 5 Inquiry and repeated throughout the IRP process that the approved IRP will be subsequently used by BC Hydro and government to justify particular projects and reduce or eliminate normally required rigorous scrutiny of those. It is appropriate and necessary for BC Hydro to look to large generation sources to meet growth in demand, and a preliminary assessment of the options possibly available might well be recommended. But, inclusion of Site C at this stage is inconsistent with the concept that the Plan is to provide overall direction, but not determine individual projects.
- Some FNs have also declined to indicate support or otherwise comment on the Site C project as it will be situated and should be first and foremost a matter of consultation and negotiation with affected FNs in the area. Extensive social/environmental assessments and regulatory process must be completed before Site C approval; in the interim, reliance on the project as the largest contributor to new generation capacity creates major uncertainty and implications for other parts of the Plan.
- FNEMC supports the focus on Resource Smart options, including addition to the Revelstoke plant. To the extent such options to increase efficiency are cost-effective, they are a preferred approach over new construction,

minimizing new land and environmental impacts, and maximizing overall system efficiency.

Recommended Action 6

- In general, FNEMC supports these options. FNEMC agrees with use of available power from the Columbia River Treaty, and with backup use of the Burrard Thermal Station as needed. The purchase of additional power on an interim basis is also supportable and we recognize likely unavoidable under current demand projections.
- We do question, however, in light of overall commitments to green energy, why additional market purchases would be made ahead of using power from the Columbia River Treaty. To our understanding, the former would be hydro, while the latter, depending on source, might most likely be thermal generated electricity. Provincial commitments to clean energy and reduced GHG emissions are ultimately much less meaningful if accomplished through displacement of emissions onto neighbouring jurisdictions rather than through real reductions.

Recommended Action 7

- We note that some initial work is already underway on this project, so inclusion in the plan is perhaps debatable, apart from the commitment to re-evaluate in the event that load forecasts do not materialize as expected. Nevertheless, as the FNEMC endorses upgrading of existing infrastructure where possible and cost-effective, we are supportive in principle of this project. The large amount of uncertainty regarding future LNG facilities, and the recent government announcement regarding the designation of natural gas as clean energy for the purposes of generation for such facilities do, however, raise serious questions and highlight the need for very timely and effective contingency planning. The LNG and electrification issues are further addressed under Recommendations 9 and 10.

5.2.3.1.3 Buy More Made-in-BC Power

Based on participation in the regional workshops in 2012, the BCFNEMC has reported the following comments related to the “Buy More” recommended action:

Recommended Action 8

- The FNEMC and many FNs are supportive of clean energy and privately owned and developed generation. Both are subjects of great interest, a number of communities still being off-grid and dependent on diesel generation, and many also looking at development possibilities to provide additional local economic benefits. Some important conditions are essential to FN support for specific projects and a successful call for more IPP generation:

FNs need to be afforded opportunities to be full participants in the procurement process and future projects, including the possibility of a preferential call for FN owned projects.

FN rights and title interests must be fully respected; earlier processes that encouraged a mini staking rush in FN traditional territory by potential developers seeking potential micro-hydro sites caused unnecessary resentment and exclusion. Unused water rights or licenses from those events should revert back to the province or to local FNs.

Calls need be sensitive and flexible to accommodate constraints on FN capacity and financing source; the process can and should be designed to encourage rather than discourage FN interest.

5.2.3.1.4 Prepare for Potentially Greater Demand

Based on participation in the regional workshops in 2012, the BCFNEMC has reported the following comments related to the “Prepare for Potentially Greater Demand” set of recommended actions:

Recommended Action 9a and 9b

- The FNEMC has taken no position on the LNG facilities, and is not opposed in principle to supplying them with electricity. It is apparent, however, that government direction on clean energy requirements to be met by BC Hydro is to some degree inconsistent with government policy on LNG. Recent announcements that natural gas to power the LNG industry will be considered clean when for all other purposes it is not highlight the inconsistency. Transmission costs should be carried by the developers, not general customers. And we note that the new transmission planned to come from Peace River assumes that Site C will be approved and coming into service; FNEMC believes this is a still very uncertain and problematic assumption.
- With respect to additional procurement options to service LNG (and possibly the natural gas industry in North Eastern BC), earlier points regarding IPP procurement would be applicable. In most circumstances, generation relatively near to demand is also efficient and desirable. FNs traditional lands extend across the North, and Northern FNs may have more limited economic opportunities than elsewhere in the province; they should be consulted early, and given first or full opportunity to develop or co-develop additional generation projects.

Recommended Action 10

- As with LNG, the FNEMC and FNs individually are generally open to (and in some instances participating in) development of the natural gas industry. We do not object to electrification – and are in fact supportive to the extent that will contribute to lower fossil fuel use and GHG emissions. But such support also comes with important reservations:

FNs and other Hydro consumers should not face tighter supply, higher costs, or more non-clean generation requirements as a result of extending electricity to the oil and gas industry;

Industry should be required to pay full costs of new or upgraded transmission, and

FNEMC again notes inconsistencies between various government policies (GHG targets, clean energy requirements, natural gas policy, LNG policy, etc.) which may influence these decisions. While sympathetic with Hydro's obligations to plan within the legislative and policy direction it has received from government, we believe it nevertheless incumbent on Hydro to comment on inconsistencies with broader policy and to appeal to government to address those.

Recommended Actions 11a and 11b

- We heard little FN interest beyond curiosity regarding pumped storage possibilities. As the concept is entirely untested in the province, it is difficult to gauge possible FN interest and project feasibility. Provided however that such facilities can be developed in an environmentally responsible manner, and with assurance of long-term need and appropriate rate design to ensure financial viability, individual projects could be a suitable vehicle for FN investment. The FNEMC would be supportive in those circumstances.
- Gas offers the obvious advantages of firm supply, relatively short lead times compared to other facilities, flexibility of location, and reduced transmission requirements. As the IRP notes, however, relatively little work has been done on gas fired generation for many years. Extensive consultation with FNs and others will be required before new projects of any magnitude can be brought on-stream.

5.2.3.1.5 Additional Feedback from the BCFNEMC

Based on participation in the regional workshops in 2012, the BCFNEMC has reported the following additional feedback associated with the draft Integrated Resource Plan:

“Exclusions and Omissions”

- A number of significant issues and initiatives are not included in BC Hydro’s recommended actions, some of those being previously proposed for inclusion and others being raised by FNs in the initial round of regional workshops.

Province-wide Electrification: In addition to the natural gas industry, electrification of ports, vehicles, industrial equipment, and end-use heating were all put forward for consideration in early discussions. We note that BC Hydro has determined that further analysis and exploration of these possibilities should occur, but no further action is proposed at the present time. Given already difficult targets for clean energy, projected demand increases, and substantial uncertainty regarding supply options such as Site C, we concur.

Export Market Development: FNEMC and many FNs expressed serious concerns in 2011 with government direction and proposals to pursue expanded exports. Most recent Hydro analysis indicates insufficient market opportunities for the foreseeable future. It remains our view that domestic needs, reasonable pricing, clean energy and GHG emission targets should all continue to receive higher priority than future export possibilities.

Transmission Planning: BC Hydro invited debate and comments in 2011 regarding its approach to transmission planning; there was considerable support among FN participants for a proactive approach that would reduce environmental impacts and reactive transmission developments that increasingly fragment FN and other rural lands. The FNEMC addressed this issue in its 2011 report, observing that the advantages of effective planning could substantially outweigh perceived risks and disadvantages. Hydro now proposes to continue a status quo or essentially reactive approach on this issue. We believe that is a mistake.

Energy Planning from a FN Territorial Perspective: BC Hydro has acknowledged in recent documents and FN presentations that it did not adopt

2011 submissions from FNs and the FNEMC that FN rights and title to traditional territory in the province be considered as a fundamental basis on which to plan future generation and transmission requirements. BC Hydro has argued in effect that as the IRP is to be a province-wide plan, it is not feasible to build it based on FN territorial or other local priorities.

The FNEMC does not accept that argument. In our view, it is entirely possible for BC Hydro and the province to initiate planning first from a local or regional perspective and to build on those to form provincial plans and policy. Certainly, a combination of regional and province-wide approach is feasible.

We believe that FN legal interests must be fully considered and incorporated at the outset of planning rather than at the end; FN and related regional land-use plans in the province should be a priority for completion; comprehensive cumulative effects assessments must be undertaken and carried forward. Taking these steps would unquestionably reduce future conflicts, increase FN access and interest in participation in energy development opportunities, enhance support for the IRP and facilitate future Hydro-FN cooperation on other issues.

First Nations Equity Participation and Revenue Sharing: The FNEMC and other participants commented in 2011 on the need for Hydro and the province to adopt new ownership and revenue policies to permit and facilitate FN participation in major energy projects. In addition to early engagement of FNs in the planning process as noted above, we see equity and revenue-sharing policies, now adopted in several other jurisdictions and widely used by industry in various sectors of the economy, being key to FN economic and social development, and to local or regional support for major projects.

It is clear that major developments can and often do have significant adverse impacts on the local environment and FN lifestyles, while offering the majority of benefits to customers or shareholders far distant from those impacts. Yet government and BC Hydro continue a very restrictive and conventional

approach to resolution and mitigation; it is disappointing that more progressive and inclusive concepts do not appear to be even referenced in the IRP documents. They are needed if government and BC Hydro are genuinely committed to improving FN relations, and if the IRP, when completed or approved, is to receive broad acceptance and support for implementation.

Remote Community Electrification: While already operating and technically not part of the IRP process, the FNEMC wishes to reiterate its support for this program. Basic services, reliability, and affordability of electricity have been long-standing issues for many rural and isolated FN communities. It is difficult, and even absurd in some circumstances, to seek support from FNs for energy conservation, clean energy, and major new generation and transmission facilities around the province at the same time as people remain without adequate or reliable service to their homes or community. We encourage Hydro to continue the RCE program, to maintain long-term commitments to replacing remote diesel generation with renewable or clean energy sources, and to re-establish terminated DSM measures or establish new home conservation initiatives to replace them.

“Process Issues – Past and Future”

- FNEMC has participated in both the technical and First Nations consultation streams of the IRP since its inception in 2010; it was also a participant in the 2009 Section 5 BCUC Inquiry. We acknowledge that BC Hydro has worked diligently to produce a long term plan to guide its operations over the next 20-30 years, but we must also comment that the ability of FNs and others to rely on the process and Plan yet to emerge has diminished somewhat. Participation and debate in the most recent regional workshops was notably less than in the first round in 2011.
- Government interruption of the process on two occasions has created policy uncertainty and demanded considerable additional time and effort from

participants; the government interventions raise questions about the extent to which the IRP will ultimately be a rational electrical energy planning exercise or a political one. We sincerely hope that the process will now be completed on the schedule indicated in recent FN workshops and public/stakeholder meetings.

- The FNEMC would like to make a number of more specific comments on the process to-date, and recommendations as the Plan moves forward to completion and implementation.

FN Consultations: FNEMC and other FN representatives have commented on the inadequacy of “FN consultation” throughout the process. Scheduled workshops and presentations by BC Hydro have been a useful mode of information sharing, but they do not in our view meet the need for meaningful consultation.

Technical Support: Representations were made to BC Hydro in 2010 and 2011 to provide technical assistance or resources in some way to aid FN participation; some funding was initially made available through the FNEMC, but that was not carried forward or repeated in 2012, leaving many FNs with no capacity or external technical support to assist them in understanding and responding to the voluminous work and many issues and recommendations in the IRP.

Chapter 8: Omission in the draft IRP and documentation recently released of a more complete record of FN and other input and Hydro responses to that, left participating FNs disadvantaged, effectively requiring them to search through hundreds of pages of documentation to see if concerns they or others previously raised were considered and adopted in some form or rejected by BC Hydro. FNEMC and others have requested that a summary compilation of FN issues and BC Hydro responses be circulated or made available to participants at an early date and before the IRP is finalized.

Past Infringements: Many FNs in the province have serious long-standing grievances with respect to infringements of their lands and rights resulting from previous or existing Hydro activities and facilities. Some have raised these issues in the IRP process, noting that it is unreasonable and unacceptable for BC Hydro to seek support for future actions before addressing outstanding grievances. FNEMC submits that BC Hydro and government need to take a pro-active approach to resolving this problem before they can reasonably expect support from affected FNs for new initiatives.

Remaining Process Uncertainties: It remains unclear what, if any, opportunity will be extended to participants by BC Hydro to comment on revisions to the draft IRP, or by government before it approves or amends the final IRP it will receive from BC Hydro. Questions on this were raised in the recent FN workshops, but BC Hydro representatives were unable to answer them at the time. FNEMC submits that FNs and other participants should be permitted to review the revised Plan, review the record and response to consultation input, and comment to BC Hydro and/or government before the IRP becomes approved policy.

Post-IRP Policy Integration: FNEMC and others have commented on apparent inconsistencies among related government economic policies - clean air and GHG emission standards, Hydro clean energy requirements, LNG policy, and natural gas policy being most relevant in the IRP context. We recognize that these policies are beyond the scope of BC Hydro's IRP, but we urge BC Hydro to note the issues to government in transmittal of the IRP, and we hope that the province will take steps to address them.

Post-IRP First Nations Engagement: BC Hydro has advised that approval of the IRP will be followed by reviews and updates on a five year basis. FNEMC agrees with this requirement, and suggests that an initial review should likely be scheduled somewhat earlier, perhaps in three years or whenever some of

the most significant uncertainties in the Plan – Site C, LNG development – are clarified and current or contingency plans become more immediately relevant. During each such review, we encourage BC Hydro to inform and involve FNs and the FNEMC well and early on the process.

5.2.3.2 BCFNEMC Technical Advisory Committee Comments and Recommendations

The verbatim feedback from BCFNEMC on the recommended actions, based on their involvement in the Technical Advisory Committee, is set out below. For the full BCFNEMC report, see **Appendix 17**.

Please note that for consistency with other sections of this report, the numbers used by the BCFNEMC for the recommended actions, which are those used in Chapter 9 of the draft Integrated Resource Plan, have been changed to align with those used in the 2012 Discussion Guide (**Appendix 10**) and regional workshop presentation materials (**Appendix 8**).

5.2.3.2.1 Conserve More

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC has reported the following comments related to the “Conserve More” set of recommended actions:

Recommended Action 1a

- Based on the gross TRC [Total Resource Cost] information provided by BC Hydro in the draft IRP, it appears that the recommendation to pursue DSM Option 3 is reasonable and cost-effective relative to acquiring new renewable sources of supply. Other observations and comments include:

The marginal cost gap between the gross cost of DSM and the marginal cost of acquiring new supply is large. BC Hydro notes there is uncertainty in the deliverability of DSM savings and that its recommendation is prudent.

However, there are risks that BC Hydro’s proposal will not maximize the

potential cost advantages of DSM relative to new generation supply. BC Hydro should continue to monitor the costs and deliverability of DSM programs to ensure it has maximized its conservation potential.

Access to DSM programming continues to be an issue for many First Nations. BC Hydro should ensure its DSM programs include options and programs that are accessible and appropriate for First Nations. This is particularly important for remote communities where the marginal cost of generation is substantially higher than on the integrated electricity system.

Recommended Action 1b

- There appears to be merit in BC Hydro's recommendation to explore these DSM options.

Recommended Action 2

- Based on the information provided, BC Hydro's recommendation seems reasonable. Other observations and comments include:

The voluntary nature of these programs is important. BC Hydro should focus on developing and implementing voluntary programs and rate options that share the benefits of cost savings with customers that choose to participate.

As with the energy focused DSM programs, access to these programs is important. BC Hydro should ensure cost-effective capacity reduction programs are accessible in First Nations communities as well as to residential, commercial and industrial customers.

Additional Comments Related to "Conserve More"

- Access to Conservation Initiatives: Access to DSM/Conservation initiatives is a challenge for many First Nation communities – particularly those in rural and remote locations. BC Hydro needs to ensure its DSM programs are accessible and available to all First Nations communities. Relevant considerations in this regard include:

In First Nations communities housing costs and electricity bills may be paid by the Band and not the individual or family residing in the home. Therefore conservation programs involving financial incentives/assistance for repairs and upgrades or reduced electricity bills may not be as effective as in other communities.

Access to capital dollars for repairs and improvements to community facilities (both residential and commercial) may be limited compared to other communities.

Codes and standards applicable in First Nations communities may differ from provincial standards.

- **Funding for First Nation Community Energy Managers:** In recognition of the specific challenges associated with conservation/DSM initiatives in First Nations communities, BC Hydro and the Province of British Columbia should provide capacity funding for Energy Managers to support energy conservation in First Nations communities.

5.2.3.2.2 *Build and Reinvest More in Existing Assets*

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC has reported the following comments related to the “Build and Reinvest More” set of recommended actions:

Recommended Action 3

- **Conflicts between provincial level planning and regional/local environmental impacts:** Site C highlights the conflict between provincial level energy planning and regional environmental impacts. In order to develop Site C, local First Nations and communities would be asked to bear significant impacts on lands and water. No decisions or plans to advance Site C should be made without meaningful consultation and accommodation with First Nations whose lands and waters would be impacted. The Green Energy Advisory Task Force

Report similarly highlighted this issue and recommended the establishment of regional clean energy planning processes.

- Full impacts of development must be understood: The environmental attribute analysis in BC Hydro's IRP does not adequately consider the intensity of the effects associated with Site C.
- Benefits must be shared: If new projects, including Site C, can be developed in a manner that is acceptable to the impacted First Nations and communities, mechanisms must be in place to ensure the economic benefits of the project are shared fairly with the local communities. Benefit sharing must extend beyond simply offering short-term construction-related employment to local residents. Revenue sharing and project ownership must be included as benefits for local First Nations and communities. Best practices from other Canadian jurisdictions should be reviewed and incorporated into project planning and development.

Recommended Actions 4 and 5

- BC Hydro's draft IRP indicates there is a significant need for additional capacity throughout the planning period. To the extent this capacity need can be addressed by additional development at existing facilities (presuming associated cost benefits and reduced environmental impacts relative to new developments) these recommendations seem prudent and reasonable.

Recommended Action 6

- BC Hydro's recommendation appears reasonable given the cost advantages and concerns about the short-term deliverability of other capacity options.

Recommended Action 7

- The project appears prudent from a planning perspective, subject to BC Hydro obtaining the necessary environmental and other regulatory approvals.

5.2.3.2.3 Buy More Made-in-BC Power

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC has reported the following comments related to the “Buy More” recommended action:

Recommended Action 8

- In developing its procurement process, BC Hydro should address the findings of the Merrimack report. In particular:

Reducing the complexity of the bidding process and purchase agreements to permit better access for small-scale power projects.

Implementing smaller but more frequent procurements to provide more certainty and allow more flexibility for project development.

Use a mixture of procurement methods.

- Similar recommendations were made in the Green Energy Advisory Task Force Report. These changes should enhance the ability of First Nations to participate in the BC Hydro energy procurement processes. BC Hydro should also consider adjustments to its procurement processes and energy purchase agreements to accommodate projects in remote non-integrated communities.

5.2.3.2.4 Prepare for Potentially Greater Demand

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC has reported the following comments related to the “Prepare for Potentially Greater Demand” set of recommended actions:

Recommended Action 9a

- BC Hydro’s recommendation seems prudent and can be undertaken at minimal cost to ratepayers.

Recommended Actions 9b, 10, and 11b

- The potential new LNG developments represent a material load risk to BC Hydro. Acquiring the new generation and transmission infrastructure required to serve these loads would involve substantial costs for all ratepayers as well as environmental effects (related to both generation and transmission resources). The consequences of these potential loads are of sufficient scale to represent a major provincial policy concern, beyond what BC Hydro alone can be expected to address. BC Hydro's recommended actions may be prudent, but will not be sufficient alone to respond to the substantial public policy concerns related to these potential developments.
- First Nations are currently experiencing negative impacts of climate change and support efforts and policies to stabilize and reduce greenhouse gas emissions. Natural gas development (including as a fuel for transportation and electricity generation) may have a role to play in long-term provincial energy planning and global greenhouse gas emissions reductions. These potential benefits need to be weighed against the potential environmental implications of evolving gas extraction technologies. Provincial policy directions in this area continue to evolve. BC Hydro needs to be able to contribute to the provincial policy debate through timely and effective communications of the trade-offs in costs and benefits for ratepayers of pursuing expanded natural gas development.

Recommended Action 11a

- BC Hydro's feasibility study of pumped storage projects must consider the compatibility of these potential developments with First Nation land-use plans. BC Hydro's feasibility assessment should also address the potential for First Nation investment in these projects. This will require a collaborative approach with First Nations to ensure these interests are addressed in the planning process.

5.2.3.2.5 *Additional Feedback from the BCFNEMC*

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC has reported the following additional feedback associated with the draft Integrated Resource Plan:

- In the final version of the IRP, BC Hydro should, at a minimum, provide a summary of the comments received, and indicate how these comments were addressed in the final IRP. BC Hydro is not obligated to comply with every request or comment received, but at a minimum should acknowledge the comments received and indicate when such comments could not be addressed.
- BC Hydro's proposed steps to finalize the IRP and incorporate final comments received from the Technical Advisory Committee, First Nations, the public and stakeholders is not defined. BC Hydro should provide IRP participants with a timeline showing the anticipated steps between the submission of final comments and BC Hydro's submission of the final IRP to the provincial government.
- The review process contemplated by the province, and the decisions or actions that may flow from any approvals are not clear. BC Hydro and the provincial government should provide timelines for review of the IRP and clearly communicate to the public and participants in the IRP process, the decisions and actions that will follow approval of the IRP.

Appendix 1 — Letter from Ministry of Energy and Mines



RECEIVED	
FEB 22 2011	
Office of the President & CEO	
BC Hydro	
COPY:	
ACTION:	

Feb 22
ACTION: BVR/Clatheson
please draft response for DC's signature by March 1, 2011
please work with KS vs office on this.
thanks.

FEB 17 2011

Mr. David Cobb
 President and Chief Executive Officer
 BC Hydro
 18th Floor, 333 Dunsmuir Street
 Vancouver, BC V6B 5R3

Dear Mr. Cobb:

As you know, the *Clean Energy Act* (CE Act) requires BC Hydro to prepare an Integrated Resource Plan (IRP) that is consistent with good utility practice and includes a description of how BC Hydro plans to achieve self-sufficiency and respond to British Columbia's 15 other energy objectives set out in the CE Act. The IRP must also describe potential opportunities to sell electricity in the export market. The first IRP is to be submitted to the Minister of Energy no later than December 2, 2011 for consideration by Cabinet.

In order to inform Cabinet's decision whether or not to approve the IRP and whether to exempt certain export projects or energy supply contracts from the British Columbia Utilities Commission review, Cabinet may require information on related First Nations interests and concerns. I therefore ask that BC Hydro engage with First Nations with a view to identifying First Nations perspectives. I also ask that BC Hydro report to the Minister of Energy on BC Hydro's discussions with First Nations.

The report should describe the following:

1. Which First Nations have been contacted by BC Hydro or its representatives in relation to the development of the IRP;
2. What information was provided to the First Nations at various stages of the IRP development process and the efforts made to meet with First Nations, including when letters were sent and follow-up phone calls and meetings occurred;
3. A list of issues and concerns that First Nations identified; and
4. Any opportunities for follow up discussion that were made available to First Nations in response to their issues and concerns, along with a summary of the substance of those discussions.

.../2

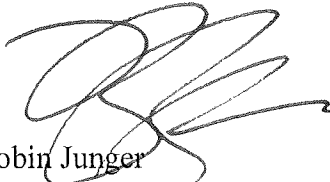
- 2 -

I understand that activities to develop BC Hydro's IRP have begun and that BC Hydro has planned a separate consultation stream for First Nations. The purpose of this letter is to outline Ministry of Energy's expectations regarding the role BC Hydro is to perform in engaging with First Nations during the development of BC Hydro's first IRP under the CE Act.

Please contact Mr. Les MacLaren, Assistant Deputy Minister, at 250-952-0204, if you have questions regarding the Ministry of Energy's expectations for First Nations consultations relating to the development of the IRP.

If you have any concerns, please let me know. Otherwise it is our expectation that you will agree with the process we have outlined.

Sincerely,



Robin Junger
Deputy Minister

pc: Les MacLaren
Assistant Deputy Minister
Electricity and Alternative Energy Division

Appendix 2 — BC Hydro Letter to Ministry of Energy and Mines



FOR GENERATIONS

David Cobb
President & Chief Executive Officer

March 2, 2011

Deputy Minister Robin Junger
Ministry of Energy
PO Box 9319 Stn. Prov. Gov't.
Victoria, B.C.
V8W 9N3

Re: First Nations Consultation on the Development of the Integrated Resource Plan

Dear Deputy Minister Junger:

Thank you for your letter dated February 17, 2011 regarding BC Hydro's consultation with First Nations on the development of the Integrated Resource Plan (IRP). We have reviewed and confirmed our agreement with the Ministry of Energy's expectations regarding BC Hydro's role to engage with First Nations to identify their perspectives during the development of the IRP.

We understand and agree that BC Hydro's First Nations Consultation Report to the Ministry of Energy will include:

- A list of First Nations that have been contacted by BC Hydro or its representatives in relation to the development of the IRP.
- A record of information that was provided to First Nations at various stages of the IRP development process and an explanation of the efforts made to meet with First Nations, including a record of when letters were sent, follow-up calls were made and when meetings occurred.
- A list of issues and concerns that First Nations identified during our consultation process including a summary of the input received from the First Nations participants at each of the regional workshops.
- A record of opportunities for follow-up discussion made available to First Nations in response to their issues and concerns, along with a summary of the substance of those discussions.

BC Hydro is committed to engaging in meaningful discussions with First Nations during the development of the IRP.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cobb", written over a horizontal line.

David Cobb

CC: Les MacLaren, Assistant Deputy Minister, Electricity and Alternative Energy Division
Bev Van Ruyven, Deputy CEO and Executive Vice-President, BC Hydro
Cam Matheson, Executive Director, Integrated Resource Planning, BC Hydro
Lyle Viereck, Director, Aboriginal Relations and Negotiations, BC Hydro
Sheila Reynolds, Manager, Aboriginal and Corporate Relations, BC Hydro

**Appendix 3 — Summary of Input and Advice Received on BC
Hydro's Proposed Approach to Province-Wide First Nations
Consultation**



2011 Integrated Resource Plan

**First Nations Workshop
Simon Fraser University, Downtown Campus (Segal Graduate School of Business)
September 24, 2010**

BC Hydro

Summary of Input and Advice Received on BC Hydro's Proposed Approach to Province-Wide
First Nations Consultation

October 14, 2010

1.0 Introduction

This document summarizes the results of a workshop held on September 24, 2010 on BC Hydro's proposed approach to province-wide First Nations consultation on the development of the 2011 Integrated Resource Plan. The workshop involved the participation of First Nations organizations and individuals, who were asked to provide input and advice on BC Hydro's proposed approach, with a view to increasing the effectiveness and efficacy of that approach within stated timeline and resource constraints. A total of 15 invitations were extended.

First Nations participants were as follows:

- Paul Blom, First Nations Energy and Mining Council
- John Lawson, First Nations Energy and Mining Council
- Bob Luke, Ktunaxa Nation Council
- Shawn Thomas, Sechelt Indian Band
- Grand Chief Clarence Pennier, Stó:lō Tribal Council
- Judith Sayers, Strategic Advisor to BC Hydro
- Michelle Thut, T'Sou-ke Nation

The input and advice received from First Nations participants on the proposed approach has been organized thematically in this summary and does not attribute statements to specific individuals. Participants and invitees who were unable to attend have been provided a draft of this summary for review and comment. BC Hydro fully acknowledges that the input and advice received from the participants represents their own personal views and does not consider this to be consultation. BC Hydro appreciates the advice and input provided by the attendees.

BC Hydro will be generating a final version of this document for distribution to First Nations invitees to the workshop and for submission to the Ministry of Energy, Mines and Petroleum Resources for consideration in the context of the province-wide consultation that will be carried out by BC Hydro during the development of the 2011 Integrated Resource Plan. The

results of the province-wide consultation will form part of BC Hydro's submission of the finalized 2011 Integrated Resource Plan to the Province in November 2011.

2.0 Background

There are three consultation streams planned for the 2011 Integrated Resource Plan: technical, public, and First Nations. Targeted discussions are underway with First Nations and the public on the proposed approaches to province-wide consultation, which is currently scheduled to begin in January of 2011.

In advance of the consultation, BC Hydro is updating data on the energy resource potential in BC. On September 14, 2010, BC Hydro hosted a Resource Options Update workshop. The purpose of this workshop was to initiate gathering input from technical energy experts on the resource potential within BC, and to foster a mutual understanding of the resource potential prior to BC Hydro undertaking an analysis. Invitations to the September 14 workshop were extended to ten First Nations individuals with technical knowledge of or considerable experience working with clean energy resources, including the First Nations Energy and Mining Council.

Consultation on the resource options will begin once a revised draft Resource Options Report, containing updated data on the energy resource potential in BC, has been developed. This draft is expected to be ready some time in December.

For the Resource Options Update workshop on September 14 and the dedicated First Nations workshop on September 24, BC Hydro offered First Nations invitees \$250.00 and reimbursement of eligible travel expenses.

3.0 Proposed Approach to Province-Wide First Nations Consultation

BC Hydro proposed two rounds of five workshops in regional locations to be determined. All 203 First Nations in the province would be invited to attend these workshops, as well as First Nations organizations, such as the First Nations Energy and Mining Council.

As proposed, the first round of five workshops would be held in January and February 2011 to obtain input on the development of a draft of the 2011 Integrated Resource Plan. The second round of five workshops would be held in September and October 2011 to obtain input on the completed draft, which is planned for completion by the end of July 2011.

BC Hydro's presentation from the September 24 workshop is appended to this summary (Appendix A).

4.0 Key Input and Advice

While all input and advice on the proposed approach was encouraged at the September 24 workshop, BC Hydro provided participants with a series of questions to assist in facilitating the discussion. The primary guiding question was as follows:

Given the constraints BC Hydro is operating under, and the recognized capacity constraints of First Nations, are there ways to increase the efficiency and efficacy of BC Hydro's proposed approach to consultation with First Nations on the development of the 2011 Integrated Resource Plan?

Participants were also asked to consider the following specific questions in providing input and advice:

1. What information is the most critical to build a common understanding of the content and use of an integrated resource plan?
2. What aspects of the 2011 Integrated Resource Plan are likely to be of most interest to First Nations?
3. What resource options are likely to be of most interest to First Nations?
4. What are the most significant issues likely to be identified by First Nations in the development of the 2011 Integrated Resource Plan?
5. Would it be helpful to provide pre-workshop reading material?
6. What can BC Hydro do to assist in providing continuity throughout the consultation period, particularly if First Nations have changes in representatives over the course of the consultation?

7. What locations in the province would likely maximize First Nations participation in workshops on the development of the 2011 Integrated Resource Plan?
8. What changes would you make to BC Hydro's proposed approach, again recognizing the constraints?
9. Is there anything else BC Hydro should consider?

The input and advice received during the workshop have been summarized in this document along four major themes:

- Meaningful consultation and relationship building
- Technical stream participation
- Timing of province-wide consultation
- Capacity funding

Details on each of these themes are presented below.

4.1 Meaningful Consultation and Relationship Building

There was broad consensus among the participants that two rounds of five workshops were not enough for meaningful consultation to occur on the development of the 2011 Integrated Resource Plan, and that there was time available prior to November 2011 to increase opportunities for participation. In particular, BC Hydro was advised that First Nations participation needed to be broadened prior to January 2011 with respect to both the consultation approach and the data collection for the Resource Options Update components; this is discussed further below in Sections 4.2 and 4.3. BC Hydro also heard that it should consider measures that would assist in building relationships with First Nations and preparing them for informed discussion in the development of the 2011 Integrated Resource Plan.

Recommended measures proposed to BC Hydro included:

- a political level meeting between the Chiefs, the Minister, BC Hydro executive, and possibly others, to discuss healing the relationship between the Province, BC Hydro, and First Nations before discussing the development of the 2011 Integrated Resource Plan;

- BC Hydro providing written notification of the 2011 Integrated Resource Plan to all First Nations in the province immediately, with a non-technical explanation of what an integrated resource plan is and is not, as well as the major milestones in its development (there was the suggestion that this written notification should be directed to the Chiefs and come from the Minister of Energy, Mines and Petroleum Resources and/or BC Hydro's Chief Executive Officer, rather than from BC Hydro Aboriginal Relations and Negotiations representatives);
- for each round of regional workshops, there should be at least 8 or 9 workshops rather than 5 to increase the opportunities for participation; and
- providing the means for First Nations to convene on their own, prior to each round of workshops, to be briefed about the content of the pending round of workshops in non-technical language by technical experts that they trust, thereby fostering the means for informed discussion at the BC Hydro-led workshops.

4.2 Technical Stream Participation

Several participants indicated that the Resource Options Update that is already underway needs to be more inclusive of First Nations. BC Hydro clarified at the workshop that the Resource Options Update is a factual updating of the inventory of resource potential in the province that serves as one of numerous inputs to subsequent 2011 Integrated Resource Plan analysis and decision-making, a process that does not begin until the new year. At this juncture, no decisions related to the 2011 Integrated Resource Plan are being made, including any that might result in specific impacts to territories.

Recommendations provided to BC Hydro for consideration in facilitating increased participation prior to January 2011 included:

- providing the means for First Nations to understand the technical information being collected and considered in the resource options update period, between now and December 2010, possibly by funding one or two technical experts trusted by First Nations to generate feedback on the supply-side resource options material produced by BC Hydro to date, for the purposes of providing a response to the request for input prior to the middle of October 2010; and

- providing a broader opportunity for First Nations to learn about the resource options update and provide input prior to December 2010, perhaps through the addition of a round of regional workshops in November 2010.

4.3 Timing of Province-Wide Consultation

A common concern among the participants was the proposed timing of the province-wide consultation sessions, not set to begin until January 2011. While it was recognized that there is a need to update the technical information on the resource options, which is the work that is occurring between September and December 2010, participants cautioned that holding off on province-wide consultation until the new year could leave First Nations with the impression that decisions have been made prior to the consultation workshops commencing. As discussed in Section 4.2, BC Hydro clarified that the nature of the work being done between September and December 2010 was the collection of technical information on potential resource options.

Recommendations provided to BC Hydro on how it might minimize the perception that consultation is occurring after decisions are made are included in Section 4.2.

4.4 Capacity Funding

Perhaps the most prominent concern voiced at the workshop was that, for meaningful consultation to take place on the development of the 2011 Integrated Resource Plan, sufficient capacity funding would be required to support that consultation. Funding recommendations advanced to BC Hydro included:

- funding one to two technical advisors for the duration of the development of the 2011 Integrated Resource Plan;
- funding an organization like the First Nations Energy and Mining Council to coordinate with communities on the development of the 2011 Integrated Resource Plan;
- providing opportunities to access financial resources at both the umbrella organization and community level; and

- increasing the honorarium rate of \$250 per day for First Nations representatives would encourage higher levels of participation at the workshops.

4.5 First Nations Comments on BC Hydro's Summary of the September 24th workshop

BC Hydro sent all invitees to the September 24, 2010 workshop a copy of the above summary of input and advice received at the workshop and invited further comment. BC Hydro has received the following additional comments:

- In Section 4, Key Input and Advice, "expected most significant issues" are not addressed, although the question was raised. Discussion on this was admittedly quite brief, but we did indicate that recognition of FN land interests and tenure would in all likelihood be a key issue (and potentially affect many others); and we noted that increased focus on export opportunities separately and in addition to meeting domestic requirements could significantly change analysis and support or opposition to some development scenarios. I believe it was also mentioned that careful consideration of local/region-based vs. province-wide analysis of various scenarios will be important; much of consultation input and participant concerns or interests will be local - subsequent analysis and decisions, if disproportionately made on a much larger scale, will create inconsistencies and contradictions.
- Section 4.1, 4.2, and 4.3 all address the issues of adequacy and timing of FN consultations. We agree with the comments contained, but would note that FNEMC also specifically recommended a quick initial round of regional meetings/workshops, ideally in November, as a means to increase FN contact, participation, and understanding of the process at the earliest stage possible. Our experience in the 2009 Inquiry process was that, regardless of other communication efforts that might have been made, the first round of workshops provided the first real information and understanding of the process to most participants. Rounds two and three as planned can only be successful if participants are reasonably well informed, active, and at least conditionally supportive of the overall process before they occur. We continue to support this recommendation.
- Section 4.2 and 4.3 both speak to the concerns expressed by several participants regarding the Resource Options updates currently underway. While we accept that the summary is

accurate of the conversation, we would still respectfully disagree with Hydro's contention that because of the technical focus of the Resource Options updates, they will not affect FN interests in any significant way. In our view, the methodology, scope and parameters of these updates might well potentially colour later analysis and decisions. And even if the Hydro view is correct, Hydro's task to gain support for that phase of work and later decisions will be more difficult if only "the experts" have been involved to that point, and others feel they have been deliberately left out.

- A significant issue not raised in the workshop owing to lack of time, but discussed between us on September 14 and again Friday, is the need for integration of public consultations with the separate FN consultations. We agree and support the need for a FN consultation stream, but it will be essential that the two streams are connected and communicating with each other on a more or less ongoing basis throughout the IRP. Failure to recognize this need and integrate/reconcile input and concerns from both streams as the process moves along will later create a scenario of "two ships passing in the night", with resulting conflicts and frustrations for all involved.
- Finally, in Section 4.4, your report speaks to capacity funding, and we again agree with the statements made. I must note, however, that these are not only important considerations, but they are very time sensitive. The FNEMC would like to participate fully and constructively in the IRP, but I am advised that we cannot provide responses on the Resource Options papers or further input until the Council receives adequate funding commitments. Anything that can be done to expedite a positive decision on this within Hydro will be appreciated.

Appendix A



2011 Integrated Resource Plan First Nations Workshop

September 24, 2010

*Simon Fraser University, Downtown Campus,
Vancouver, B.C.*

BC hydro 

FOR GENERATIONS

Welcome & Workshop Overview

Daniel Johnston

Workshop Overview

9:00 – 9:15	Welcome, Introductions & Workshop Overview
9:15 – 10:15	2011 Integrated Resource Plan
10:15 – 10:30	Questions
10:30 – 10:45	Break
10:45 – 12:15	Discussion
12:15 – 12:30	Next Steps & Wrap Up

Workshop Overview

What is the main objective of today's workshop?

- To receive input and advice on an effective and efficient approach to province-wide consultation with First Nations on the development of the 2011 Integrated Resource Plan

Workshop Overview

What information will we be providing in this workshop?

- An **overview** of what is in and what is not in an integrated resource plan
- The context in which an integrated resource plan is **produced** and how it is **used**
- The **constraints** that BC Hydro is operating under to produce the 2011 Integrated Resource Plan, the first under the new Clean Energy Act
- Considering those constraints, BC Hydro's **proposed approach to consultation** with First Nations province-wide on the development of the 2011 Integrated Resource Plan

Workshop Overview

What information are we seeking from you?

- **Input and advice** on BC Hydro's proposed approach to consulting First Nations province-wide on the development of the 2011 Integrated Resource Plan, considering BC Hydro's constraints (BC Hydro does not characterize today's workshop as consultation)

Workshop Overview

How will we be using the information we gather today?

- BC Hydro will **prepare and provide you with a draft high-level summary** of the input and advice received on the consultation approach to ensure that what we heard is fairly represented
- We will e-mail this draft summary to you on September 27 and ask for **your feedback** by end of day on October 4 **for incorporation into the final summary**
- The final summary will then be **forwarded to you and the provincial government** for its consideration in the context of BC Hydro's consultation on the development of the 2011 Integrated Resource Plan

2011 Integrated Resource Plan

Randy Reimann

2011 Integrated Resource Plan

What is an integrated resource plan?

- A long-range, high-level plan for meeting customers' electricity needs and addressing electricity export opportunities over the next 20 years
- Considers conservation measures as well as generation resources and transmission options and draws conclusions on the degree to which to rely upon each option
- In considering options and drawing conclusions, an integrated resource plan does not approve construction of any particular project

2011 Integrated Resource Plan

How does an integrated resource plan differ from previous plans produced by BC Hydro?

- An integrated resource plan is submitted to Cabinet for approval
- In addition to resource options for domestic customers, an integrated resource plan includes electrification, export opportunities, and transmission
- Puts increased emphasis on consultation in the course of the plan's development, including input on the approach to consultation

2011 Integrated Resource Plan

What is driving the development of an integrated resource plan?

- The new Clean Energy Act, which requires BC Hydro to submit the first integrated resource plan to Cabinet in November 2011
 - Clean Energy Act has 16 objectives – e.g., achieving self-sufficiency, encouraging clean renewable energy/reducing greenhouse gasses, encouraging economic development and job creation – and the integrated resource plan must show how BC Hydro will respond to these objectives
 - Clean Energy Act includes 11 exempted projects, programs, contracts, and expenditures

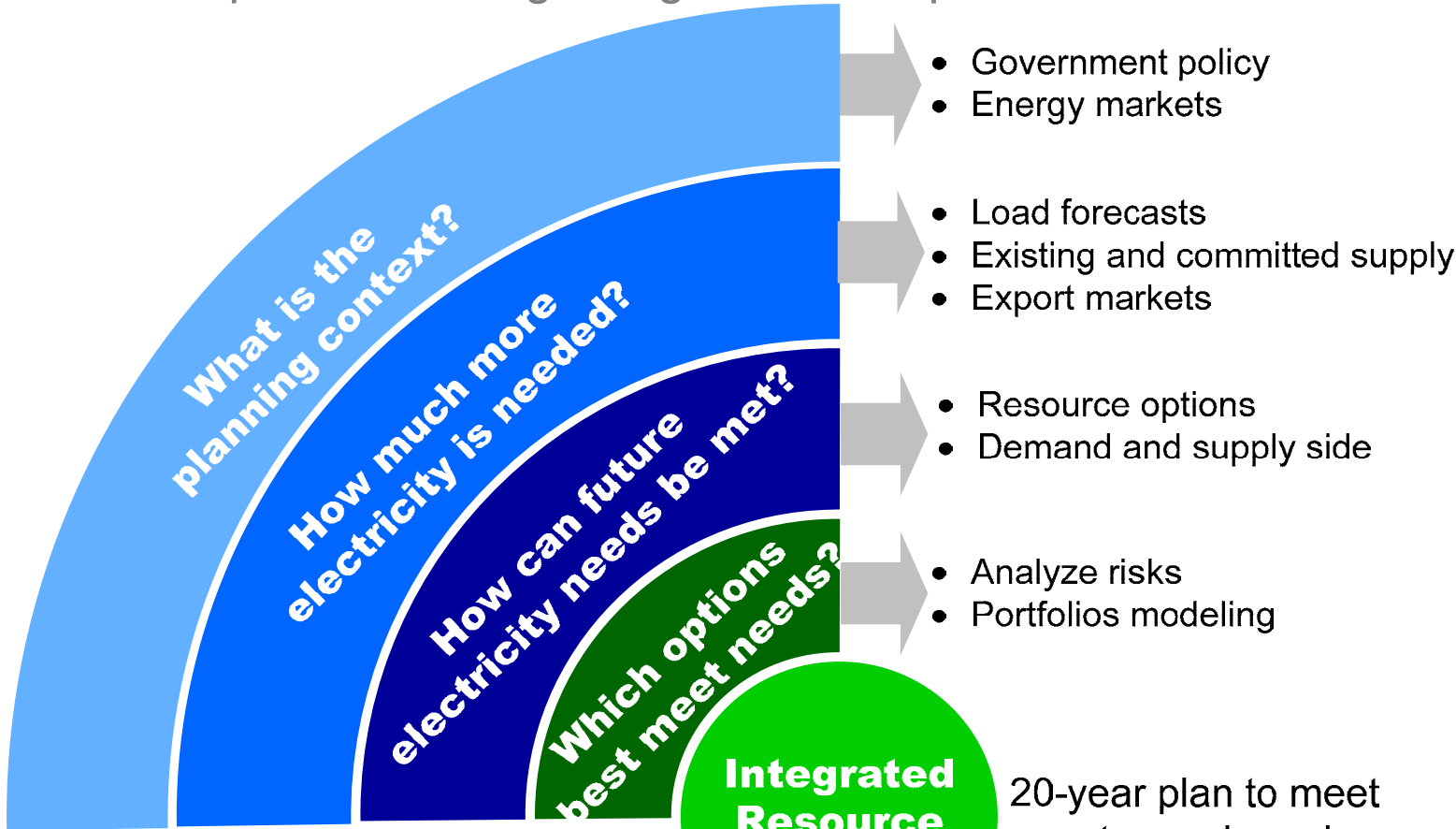
2011 Integrated Resource Plan

Clean Energy Act Exempted Projects, Programs, Contracts and Expenditures

- Northwest Transmission Line
- Bio-Energy Phase 2 – up to 1000 GWh/yr
- Integrated Power Offer – up to 1200 GWh/yr
- Clean Power Call – up to 5000 GWh/yr (actual: 3266 GWh)
- Standing Offer Program
- Feed-in Tariff Program
- Installation of smart meters by end of 2012
- Installation of a smart grid
- Mica Units 5 and 6
- Revelstoke Unit 6
- Site C (currently in stage 3 of 5)

2011 Integrated Resource Plan

What sort of questions are guiding the development of the 2011 IRP?



2011 Integrated Resource Plan

What are some of the considerations in addressing these questions?

- Load forecasts (including both peak demand and total energy) to serve loads in various locations in BC and respond to suitable export demand opportunities
- The potential for conservation to reduce the forecasted load (demand side)
- Existing and potential generation facilities and their locations in BC (supply side)
- The existing transmission system
- Requirements for new transmission lines to connect new and existing generation facilities to the forecasted load centres

2011 Integrated Resource Plan

Examples of what is considered in addressing the question
“Which options best meet needs?”

- The Clean Energy Act requires that BC Hydro hold the rights to 3,000 GWh/year of energy above self-sufficiency by 2020, and each year after
- The 2011 Integrated Resource Plan will examine how BC Hydro could meet this legislated requirement
- Part of this examination will include comparing demand side options to clean generation resources, including Site C
- Will examine costs, technical aspects (e.g., firm or intermittent energy), and environmental footprint (e.g., number of hectares of land)

2011 Integrated Resource Plan

What constraints are we operating under in developing the 2011 Integrated Resource Plan?

- Legislation – the Clean Energy Act directs BC Hydro to develop an integrated resource plan that is responsive to the objectives of that Act and that aligns with good utility practice (e.g., environmentally responsible, economical, and responsive to the concerns of First Nations and the public)
- Timeline for development of the 2011 Integrated Resource Plan, which is due for submission to the Ministry of Energy, Mines and Petroleum Resources for Cabinet approval in November 2011
- Resources that are limited

2011 Integrated Resource Plan

Once developed, what will the 2011 Integrated Resource Plan do?

- Does not, by itself, approve the construction of any specific capital projects, which remain subject to applicable regulatory approval and permitting processes, including consultation requirements
- Provides direction on, for example, future capital projects, demand side management targets, future power calls (timing, type, and design), export expenditures, and transmission infrastructure needs
 - BCUC to consider and be guided by the approved IRP
 - May be used as evidence in other regulatory proceedings (e.g., environmental assessments), for instance to present the need for Site C as compared to IPP alternatives
- Must be updated every 5 years



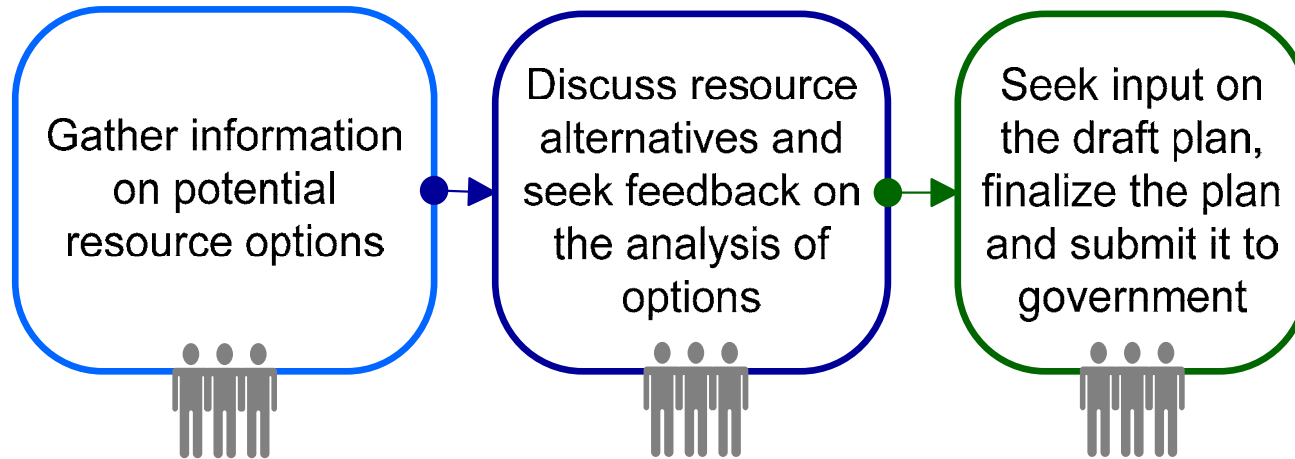
FOR GENERATIONS

2011 Integrated Resource Plan – Proposed Consultation Approach

Shauna McRanor

2011 Integrated Resource Plan – Consultation Streams

Who are we consulting on the development of the 2011 Integrated Resource Plan?



Three consultation streams

- Technical stream
- Public stream
- First Nations stream

2011 Integrated Resource Plan – Consultation Opportunities

September – December 2010

- Consultation on technical inputs into 2011 Integrated Resource Plan, such as resource options data (Resource Options Update) - Targeted discussions with First Nations and public on resource potential and methodology for assessing that potential
- Seeking input and advice in targeted discussions with First Nations and public on province-wide consultation for respective streams

January – October 2011

- Province-wide consultation

Ongoing (Post-2011 Integrated Resource Plan Approval)

- Consultation on Demand-Side Management Plan - Electricity Conservation & Efficiency Advisory Committee (First Nations participants)
- Consultation on all capital projects (future and Clean Energy Act-exempted) - Specific generation and transmission project regulatory and permitting processes

2011 Integrated Resource Plan – Resource Options Update

All resource options are being updated as part of the technical inputs into the 2011 Integrated Resource Plan, as follows:

- Transmission options
- Demand-side management options – Energy-Focused , Capacity-Focused
- Supply-side generation options –
 - Biomass - Wood-Based
 - Biomass - Biogas
 - Biomass - Municipal Solid Waste
 - Wind - Onshore, Offshore
 - Geothermal
 - Thermal - Natural Gas
 - Thermal - Coal with Carbon Capture & Sequestration
 - Hydro - Run of River
 - Hydro - Pumped Storage
 - Ocean - Wave
 - Ocean – Tidal/Hydrokinetic
 - Storage Technologies
 - Solar
 - Miscellaneous Distributed Generation

2011 Integrated Resource Plan – Proposed Consultation Approach

What are we proposing for province-wide First Nations consultation?

- BC Hydro is proposing two rounds of five regional workshops to enable meeting the timeline for delivery of the 2011 Integrated Resource Plan to Cabinet, with the resources available
 - First round of five workshops – January-February 2011
 - Obtain input into development of a draft of the 2011 Integrated Resource Plan
 - Proposed locations?
 - Second round of five workshops – September-October 2011
 - Obtain input into the draft 2011 Integrated Resource Plan prior to finalization and submission to Cabinet for approval
 - Proposed locations?.

2011 Integrated Resource Plan – Proposed Consultation Approach

- Opportunities for further input will continue after each round of workshops
- Invitations will be sent to all First Nations in BC to participate in both rounds of regional workshops
- Timeline for the delivery of the 2011 Integrated Resource Plan to Cabinet in November 2011 and resource constraints do not allow for separate consultation with each First Nation in BC

Questions & Discussion

Daniel Johnston

Questions to Consider

Given the constraints BC Hydro is operating under, and the recognized capacity constraints of First Nations, are there ways to increase the efficiency and efficacy of BC Hydro's proposed approach to consultation with First Nations on the development of the 2011 Integrated Resource Plan?

Questions to Consider

1. What information is the most critical to build a common understanding of the content and use of an integrated resource plan?
2. What aspects of the 2011 Integrated Resource Plan are likely to be of most interest to First Nations?
3. What resource options are likely to be of most interest to First Nations?
4. What are the most significant issues likely to be identified by First Nations in the development of the 2011 Integrated Resource Plan?
5. Would it be helpful to provide pre-workshop reading material?

Questions to Consider

6. What can BC Hydro do to assist in providing continuity throughout the consultation period, particularly if First Nations have changes in representatives over the course of the consultation?
7. What locations in the province would likely maximize First Nations participation in workshops on the development of the 2011 Integrated Resource Plan?
8. What changes would you make to BC Hydro's proposed approach, again recognizing the constraints?

Questions to Consider

9. Is there anything else BC Hydro should consider?
10. Are there any other questions?

Next Steps & Wrap Up

Daniel Johnston

2011 IRP – How to Stay Informed

Visit the 2011 IRP website
www.bchydro.com/irp

Join the 2011 IRP
Mailing List to
receive updates

2011 Integrated Resource Plan



British Columbia's new Clean Energy Act re term, integrated resource plan by November approval.

The 2011 Integrated Resource Plan (2011 IRP) acquiring generation and transmission resources anticipated future electricity needs.

Upcoming event

September 14, 2010 – Resource Options D first steps in developing the 2011 IRP involving potential in B.C. To initiate gathering input, workshop.



Get involved

BC Hydro is currently developing opportunities for interested parties to get involved in the 2011 IRP. More information will be available this fall.



Join the 2011 IRP Mailing List

Sign up for email updates on the 2011 IRP.

2011 IRP – How to Contact Us

Phone: **1-877-461-0161**

E-Mail: **2011IRP@bchydro.com**

Appendix 4 — List of First Nations, Tribal Councils and First Nations Organization Notified



Integrated Resource Plan Appendix 7G
Integrated Resource Plan First Nations Workshops
List of First Nations/Organization Invited

Adams Lake Indian Band	Iskut First Nation	Nuchatlaht First Nation
Ahousaht First Nation	Ka:'yu:'k't'h'/che:k'tles7et'h'	Nuxalk Nation
Aitchelitz Band	Kanaka Bar Indian Band	Okanagan Indian Band
Akisq'nuk First Nation	Katzie First Nation	Old Massett Village Council
Ashcroft Indian Band	Kispiox Band Council	Oregon Jack Creek Band
Blueberry River First Nations	Kitamaat Village Council (Haisla)	Osoyoos Indian Band
Bonaparte Indian Band	Kitasoo/XaiXais Nation	Oweekeno/Wuikinuxv Nation
Boothroyd	Kitselas First Nation	Pacheedaht First Nation
Boston Bar First Nation	Kitsumkalum	Pauquachin First Nation
Burns Lake Band	Kitsumkalum Hereditary Chiefs	Penelakut Tribe
Campbell River Indian Band	Klahoose First Nation	Penticton Indian Band
Canim Lake Band	K'omoks First Nation	Peters Band
Chawathil	Kwadacha Nation	Popkum First Nation
Cheam First Nation	Kwakiutl Indian Band	Qayqayt First Nation (New Westminster Indian Band)
Chehalis Indian Band	Kwantlen First Nation	Qualicum First Nation
Cheslatta Carrier Nation	Kwaw-kwaw-Apilt First Nation	Quatsino First Nation
Coldwater Indian Band	Kwiakah First Nation	Saik'uz First Nation
Cook's Ferry Indian Band	Kwicksutaineuk-Ah-Kwaw-Ah-Mish	Samahquam
Council of Haida Nation/Secretariat of the Haida Nation	Kwikwetlem First Nation	Saulteau First Nations
Cowichan Tribes	Lake Babine Nation	Scia'new First Nation (Beecher Bay)
Da'naxda'xw First Nation	Lake Cowichan First Nation	Scowlitz First Nation
DANE-ZAA ADISHTS'SH (Doig River First Nation)	Lax Kw'Alaams Band	Seabird Island Indian Band
Daylu Dena Council	Leq' a: mel First Nation	Sechelt (shíshálh) First Nation
Dease River First Nation	Lhatko Dene Nation (Red Bluff)	Sekw'elw'as (Cayoos Creek)
Dene Tsa'a Tse K'Nai First Nation	Lheidli T'enneh First Nation	Semiahmoo First Nation
Ditidaht First Nation	Lhoosk'uz Dene Nation	Shackan Indian Band
Dzawada'enuxw First Nation	Liard First Nation	Shuswap Indian Band
Ehattesaht Tribe	Lil'wat Nation (Mount Currie)	Shxw'ow'hamel First Nation
Esdilagh First Nation	Little Shuswap Lake Indian Band	Shxwhá:y Village
Esketemc First Nation	Lower Kootenay Band	Sik-e-dakh (Glen Vowell Band)
Esquimalt Nation	Lower Nicola Indian Band	Simpcw First Nation
Fort Nelson First Nation	Lower Similkameen Indian Band	Siska Indian Band
Gitanmaxx Band	Lyackson First Nation	Skatin Nations
Gitanyow Band	Lytton First Nation	Skawahlook First Nation
Gitanyow Hereditary Chiefs	Malahat First Nation	Skeetchestn Indian Band
Gitga'at Nation (Hartley Bay)	Mamalilikula-Qwe'Qwa'Sot'Em	Skidegate Band Council
Gitsegukla Band	Matsqui First Nation	Skii km Lax Ha
Gitwangak	Metlakatla	Skin Tye Nation
Gitxaala Nation	Moricietown Band Council	Skowkale First Nation
Gitxsan Treaty Society (Hereditary Chiefs)	Mowachaht/Muchalaht First Nation	Skuppah
Gwa'Sala-Nakwaxda'xw Nation	Musqueam Indian Band	Skwah First Nation
Gwawaenuk Tribe	Nadleh Whut'en First Nation	Sliammon First Nation
Hagwilget Village	Nak'azdli Band	Snaw-Naw-As First Nation (Nanoose)
Halalt First Nation	Namgis First Nation	Snuneymuxw First Nation
Halfway River First Nation	Nazko First Nation	Songhees First Nation
Heiltsuk Nation	Nee-Tahi-Buhn Band	Soowahile Indian Band
Hesquiaht First Nation	Neskonlith Band	Splats'in First Nation
High Bar First Nation - Llenlney'ten	Nicomien Indian Band	Spuzzum First Nation
Homalco First Nation	Nisga'a Village of Gingolx	Squamish Nation
Hupacasath First Nation	Nisga'a Village of Gitwinksihlkw	Squiala First Nation
Huu-ay-aht First Nations	Nisga'a Village of Laxgalts'ap	St. Mary's Band
	Nisga'a Village of New Aiyansh	St'át'imc Nation/Hydro Office
	Nooaitch Indian Band	Stellat'en First Nation
	N'Quatqua First Nations	



Integrated Resource Plan Appendix 7G
Integrated Resource Plan First Nations Workshops
List of First Nations/Organization Invited

Stswecem'c/Xgat'tem (Canoe Creek Band)
Stz'uminus First Nation
Sumas First Nation
Tahltan Indian Band
Takla Lake First Nation
Taku River Tlingit First Nation
T'it'q'et
Tk'emlups Indian Band (Kamloops)
Tla-o-qui-aht First Nations
Tlatlasikwala
Tl'azt'en Nation
Tl'etinqox-t'in Government Office
Tlowitsis Tribe
Tobacco Plains Indian Band
Toosey Indian Band
Toquaht Nation
Tsalalh (Seton Lake: Chalah)
Tsartlip First Nation
Tsawout First Nation
Tsawwassen First Nation
Tsay Keh Dene
TseK'hene First Nation
Tseshaht First Nation
Tseycum First Nation
Tsi Del Del
Ts'kw'aylaxw First Nation
Tsleil-Waututh First Nation (Burrard)
T'Sou-ke First Nation
Tzeachten First Nation
Uchucklesaht Tribe
Ucluelet First Nation
Ulkatcho First Nation
Union Bar Band
Upper Nicola Band
Upper Similkameen Indian Band
We Wai Kai Nation
West Moberly First Nations
Westbank First Nation
Whispering Pines/Clinton Indian Band
Williams Lake Indian Band
Xa'xtsa (Douglas) First Nation
Xat'sull First Nation (Soda Creek)
Xaxli'p
Xeni Gwet'in First Nations Government
Xwisten (Bridge River Indian Band)
Yakweakwoose Band
Yale First Nation
Yekooche First Nation
Yunesit'In Government (Stone Band)

Tribal Councils and Organizations

Carrier Chilcotin Tribal Council
Carrier-Sekani Tribal Council
Coastal First Nations
First Nations Energy and Mining Council
Hul'Qumi'Num Treaty Group
In-Shuck-Ch Tribal Council
Kaska Dena Council
Ktunaxa Nation Council Society
Kwakiutl District Council
Lillooet Tribal Council
Lower St'át'imc Tribal Council
Maa-Nulth First Nations
Musgamagw Tsawataineuk Tribal Council
Naut'sa Mawt Tribal Council
Nicola Tribal Association
Nisga'a Lisims Government
Nlaxa'Pamux Nation Tribal Council
Nuu-Chah-Nulth Tribal Council
Office of the Wet'suwet'en
Okanagan Nation Alliance
Oweekeno-Kitasoo-Nuxalk Tribal Council
Sencoten Alliance
Sto:Lo Nation
Sto:Lo Tribal Council
Tahltan Central Council
Treaty 8 Tribal Association
Tsilhqot'in National Government
Tsimshian Tribal Council

Appendix 5 — Notification Letters & Information Packages



Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

January 31, 2011

Re: BC Hydro's Integrated Resource Plan

We are writing to notify you that BC Hydro is developing an Integrated Resource Plan. The Integrated Resource Plan is a 20-year, province-wide plan that describes how BC Hydro will meet future demand for electricity through such measures as energy conservation and clean energy generation. The plan will be updated every five years.

BC Hydro's Integrated Resource Plan will support the Province of British Columbia to achieve the objectives contained within the *Clean Energy Act*, including the requirements for electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. As well, given the long transmission construction lead times, the plan will contain an assessment of transmission requirements looking out 30 years into the future.

BC Hydro would like to consult with First Nations to learn about your interests as they relate to the Integrated Resource Plan. Please note that this does not replace the consultation that BC Hydro undertakes on capital projects. Consultation on the Integrated Resource Plan represents very early consultation at the long-term planning phase. Understanding First Nations interests in energy and transmission development, both from a place of aboriginal rights as well as economic development plans, will be very useful input to shape BC Hydro's Integrated Resource Plan.

BC Hydro will be holding two rounds of regional workshops and invites you to participate. We will be seeking input into the development of the draft Integrated Resource Plan during the first round (March 2011). In the second round (Fall 2011) we will be seeking your feedback on the draft Integrated Resource Plan. In addition, BC Hydro will invite written comments from First Nations following each of the two rounds of regional workshops.

In advance of the March workshops, BC Hydro will be sending out further information about the Integrated Resource Plan topics. Information on the development of the Integrated Resource Plan can

be found at: bchydro.com/planning_regulatory/long_term_electricity_planning/irp.html. This webpage will continue to be updated as the planning process unfolds.



The *Clean Energy Act* requires BC Hydro to submit an Integrated Resource Plan to the Provincial Government by the end of November 2011 for their review and approval. The input and comments BC Hydro receives from First Nations will be summarized in a consultation report that will be submitted to the Provincial Government when we submit our Integrated Resource Plan.

Participant funding of \$250.00/person is available for two designated representatives from each First Nation and Tribal Council to attend a First Nation workshop in both rounds 1 and 2. BC Hydro will also reimburse eligible travel expenses for all designated representatives who attend a First Nation workshop in the region where their First Nation or Tribal Council office is located.

For background information on BC Hydro, the Integrated Resource Plan, and participant registration, please find enclosed:

- A First Nations workshop Schedule and Registration Form;
- Travel Funding Guidelines and a Travel Expense Claim Form;
- An Integrated Resource Plan Information Sheet; and
- Quick Facts on BC Hydro and the provincial electricity system.

In addition to the First Nations regional consultation workshops, BC Hydro also invites First Nations to attend stakeholder meetings and public open houses on the Integrated Resource Plan (the schedule for these sessions is also enclosed). Please note that participant and travel funding is not available to attend the stakeholder meetings and public open houses.

We look forward to receiving your registration form and hearing your input into the development of the Integrated Resource Plan. For those unable to attend the First Nations consultation workshops please contact us if you would like to receive information on the Integrated Resource Plan.

If you have any questions, please do not hesitate to email us at 2011IRP@bchydro.com or call 1-877-461-0161 extension 3.

Sincerely,

Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations



Integrated Resource Plan First Nations Workshop Registration

Please send registration to the attention of **Loretta James**

Phone: 1.877.461.0161 extension 3

Email: 2011irp@bchydro.com

Fax: 604.528.2822

PLEASE PRINT CLEARLY

Workshop Community: _____

Workshop Date: March _____ 2011

First Nation, Tribal Council

1. _____ 2. _____

Designated Representatives (eligible for participant funding)

Additional Participants (not eligible for participant funding)

Phone

Fax

Email

Community	Date	Time	Location
Nanaimo	March 2, 2011	9:00am-3:00pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
Campbell River	March 3, 2011	9:00am-3:00pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Abbotsford	March 4, 2011	9:00am-3:00pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070
Kamloops	March 7, 2011	9:00am-3:00pm	Coast Canadian Inn 339 Paul Street - 250.372.5201
Vancouver	March 11, 2011	9:00am-3:00pm	SFU School of Business, Rix Room 500 Granville Street - 778.782.5000
Terrace	March 14, 2011	9:00am-3:00pm	Terrace Best Western 4553 Greig Avenue - 250.635.0083
Fort St. John	March 16, 2011	9:00am-3:00pm	Quality Inn Northern Grand 9830 100th Avenue - 250.787.0521
Prince George	March 17, 2011	9:00am-3:00pm	Coast Inn of the North 770 Brunswick Street - 250.563.0121
Castlegar	March 21, 2011	9:00am-3:00pm	Fireside Inn 1810 8th Avenue - 250.365.2128

**Integrated Resource Plan
Travel Expense Claim Form**

ELIGIBLE EXPENSES

Dinner per diem – continental breakfast and lunch will be provided at the workshop	\$26.00
Mileage – from the First Nation, Tribal Council or First Nation Organization Office to the nearest consultation workshop. Applicable for travel of 25 km or more.	\$0.52 per kilometre
Hotel Accommodation – Applicable when travelling more than 50 km and subject to providing a receipt	\$125.00
Airfare – If you are unable to attend a session in your region please check with our office regarding costs to be reimbursed, prior to booking travel	Full cost of an economy class ticket

Name (please print): _____

First Nation (please print): _____

Detail of Expenses	Amount
TOTAL	

I hereby certify that all expenses claimed were incurred to attend BC Hydro’s Integrated Resource Plan First Nations workshop

Workshop Location & Date

Signature of Claimant

Date Signed

Reimbursement cheques for Travel Expenses will be issued to the applicable First Nation, Tribal Council, or First Nation Organization. Please return this completed form with applicable receipts attached, by mail or fax to:

ATTN: Loretta James Fax: 604.528.2822 Tel: 1.877.461.0161 extension 3
 BC Hydro, Aboriginal Relations and Negotiations
 6911 Southpoint Drive – 10th Floor
 Burnaby, BC V3N 4X8



Integrated Resource Plan Consultation Schedule

First Nations Workshops			
<i>Participant funding available for 2 designated representatives of each First Nation & Tribal Council</i>			
Community	Date	Time	Location
Nanaimo	March 2, 2011	9:00am-3:00pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
Campbell River	March 3, 2011	9:00am-3:00pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
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Prince George	March 17, 2011	9:00am-3:00pm	Coast Inn of the North 770 Brunswick Street - 250.563.0121
Castlegar	March 21, 2011	9:00am-3:00pm	Fireside Inn 1810 8th Avenue - 250.365.2128

Stakeholder Meeting & Public Open Houses			
<i>No participant funding available to attend the stakeholder or public sessions</i>			
Community	Date	Type & Time	Location
Victoria	March 9, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Hotel Grand Pacific, 463 Belleville Street
Campbell River	March 10, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Coast Discovery Inn & Marina, 975 Shoppers Row
Vancouver	March 15, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	SFU Morris J Wosk Centre, Room 420, 580 West Hastings SFU Harbour Centre, Segal Room, 515 West Hastings
Abbotsford	March 16, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Clearbrook Community Centre, 2825 Clearbrook Road
Kamloops	March 17, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Ramada Kamloops, 555 West Columbia Street
Terrace	March 22, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Terrace Sportsplex, 3320 Kalum Street
Prince George	March 23, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Prince George Ramada, 444 George Street
Fort St John	March 24, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Quality Inn Northern Grand, 9830 100 th Avenue
Vernon	March 29, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Vernon Recreational Complex, 3310 37 th Avenue
Castlegar	March 30, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Castlegar & District Community Centre, 2101 – 6 th Avenue
Fort Nelson	March 31, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Woodlands Inn & Suites, 3995 50 th Avenue South
Cranbrook	April 8, 2011	Public Open House - 5:00-9:00pm	Prestige Rocky Mountain Resort, 209 Van Horne Street South



Integrated Resource Plan – Information Sheet

Why are we developing the Integrated Resource Plan?

While British Columbians are doing more than ever to conserve electricity, B.C.'s overall electricity use is expected to continue to increase as a result of projected population growth and projected development in the energy-intensive industrial sector. BC Hydro forecasts that the province's electricity needs will grow by 20 to 40 per cent over the next 20 years. The Integrated Resource Plan is BC Hydro's long-term plan for acquiring the resources needed to meet customers' needs for the next 20 years

What objectives will the Integrated Resource Plan address?

BC Hydro's Integrated Resource Plan will support the province in meeting the objectives contained within the *Clean Energy Act*, including achieving electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. As well, given long transmission construction lead times, the plan will contain an assessment of transmission requirements looking 30 years out. As BC Hydro implements the long-term vision contained in the *Clean Energy Act*, the fundamental electricity planning objectives to provide customers with reliable power in a cost-effective manner continue to be central to the planning process and reflective of good utility practice.

What is B.C.'s Clean Energy Act?

B.C.'s new *Clean Energy Act* establishes a long-term vision for B.C. to become a clean energy leader. The Act guides government, BC Hydro and the British Columbia Utilities Commission in advancing the province's ambitious sustainable energy vision. The Act advances 16 specific energy objectives. BC Hydro's Integrated Resource Plan will support the province in achieving the objectives contained within the *Clean Energy Act*, including achieving electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. For more information on the *Clean Energy Act* please visit:

bchydro.com/news/articles/press_releases/2010/new_act_powers_bc_forward.html

How will BC Hydro meet future electricity requirements?

BC Hydro's core strategy to meet future electricity requirements is to 'conserve, build and buy'. Conservation is the first priority, and is targeted to meet approximately two-thirds of B.C.'s future electricity needs, as per the *Clean Energy Act*. Building a sustainable future also includes reinvesting in heritage hydroelectric assets, exploring new clean energy infrastructure projects such as Site C, and acquiring renewable energy from independent clean energy producers.

What are the key topics related to the development of the Integrated Resource Plan?

The key topics for the Integrated Resource Plan include conservation options, electricity generation options, long-range transmission options, the potential for electrification (switching from other fuel sources to electricity, such as may happen in the transportation sector), and the potential market opportunity to export clean power.

If I have questions about the Integrated Resource Plan and the related consultation what should I do?

Details of how to get involved in the First Nations consultation workshops or the public open houses is available by calling us at 1.877.461.0161 extension 3, or on the BC Hydro website at: bchydro.com/irp

Where can I get further information about BC Hydro?

Each year BC Hydro prepares *Quick Facts* which summarized information on BC Hydro's operations for the year. The *Quick Facts* provides an overview of the corporate purpose, annual facts, financial information, and operating statistics.

If you would like to know more about opportunities, such as contracting and employment, please call 1-877-461-0161 or visit us online at: bchydro.com/community/aboriginal_relations.html

QUICK FACTS



FOR THE YEAR ENDED MARCH 31, 2010

Corporate Purpose

BC Hydro's corporate purpose is to provide reliable power, at low cost, for generations.

Our Business

BC Hydro is a commercial Crown corporation owned by the Province of British Columbia. BC Hydro is one of North America's leading providers of clean, renewable energy, and the largest electric utility in British Columbia, serving approximately 95 per cent of the province's population and approximately 1.8 million customers.

We are responsible for reliably generating between 42,000 and 52,000 gigawatt hours (GWh) of electricity. Electricity is delivered to our customers through a network of over 18,000 kilometres of transmission lines and 57,000 kilometres of distribution lines.

2010 Facts

- Net income was \$447 million, compared with \$365 million the year before, resulting in a return on equity of 12.49 per cent.
- Water inflows were five per cent lower than the prior year resulting in less hydro generation than in the prior year, which was partially offset by reduced domestic load requirements, primarily as a result of lower sales to large industrial customers impacted by the economic downturn during the year.
- Power Smart conservation programs continued to deliver cost-effective energy, producing cumulative annual energy savings of 1,778 GWh in fiscal 2010.
- Property, plant and equipment expenditures of \$2,406 million are 72 per cent higher than the prior year primarily due to BC Hydro's acquisition of a one-third interest in Teck Metals Ltd.'s Waneta Dam and generating facility in March 2010, the Vancouver Island Transmission Reinforcement project, Revelstoke Unit 5 installation and system improvements to the distribution network. This is a positive result given the significant capital expenditure requirements over the next several years to be able to meet load growth requirements and maintain aging infrastructure.

Energy Facts

Definitions

power = how much electricity is consumed by customers (or produced by power generators) at any instant in time

energy = how much is consumed (or produced) over a period of time

capacity = the maximum sustainable amount of energy that can be produced or carried at any instant. Example: a car engine's horsepower rating is its energy capacity

Units of power

- 1 kilowatt (kW) = 1,000 watts
- 1 megawatt (MW) = 1,000 kilowatts (or 1 million watts)
- 1 gigawatt (GW) = 1,000 megawatts (or 1 billion watts)

Units of energy

- 1 kilowatt hour (kWh) = 1,000 watts for 1 hour (1,000 watt hours)
- 1 megawatt hour (MWh) = 1,000 kWh
- 1 gigawatt hour (GWh) = 1,000 MWh

(Note that the abbreviations for prefixes follow metric convention, so kilo is k, while mega and giga are capitalized. The abbreviation for watt is W.)

Power to Energy ratios – rule of thumb

- Power to energy – for thermal electric: MW x 8 = GWh per year
- Power to energy – for large hydro: MW x 5 = GWh per year

Comparison statistics

- The average household in BC Hydro's service area uses about 11,000 kWh per year.
- A large industrial customer, such as a pulp mill, might use 400 GWh in a year, equal to the consumption of 40,000 households.
- A typical large office building of 20–25 storeys might consume 5 GWh in a year, equal to the consumption of 500 households.
- A large "big box" retail outlet might consume 3.5 GWh per year, or roughly the equivalent of 350 households.
- A 1 MW micro hydro plant produces about 5 GWh per year of green energy.

Financial Information
(in millions)

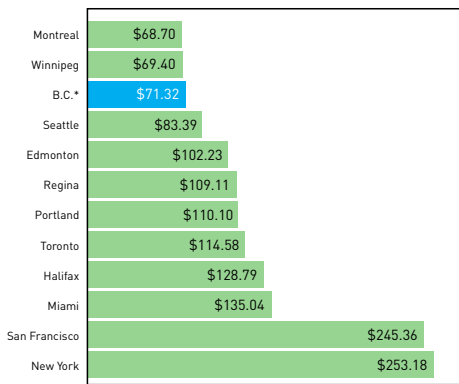
For the years ended as at March 31

	2010	2009
Revenues	\$ 3,822	\$ 4,269
Net income	\$ 447	\$ 365
Property, plant and equipment and intangible assets	\$ 14,104	\$ 12,099
Property, plant and equipment and intangible additions	\$ 2,406	\$ 1,397
Net long-term debt ¹	\$ 10,696	\$ 9,135

¹Consists of long-term debt, including the current portion, net of sinking funds and cash and cash equivalents.

Residential Rates

Monthly \$ Bills per 1,000 KWh



Source: "Comparison of Electricity Prices in Major North American Cities—Rates Effective on April 1, 2010"—Hydro Quebec.

Note: All bills and average rates are in Canadian currency and exclude taxes. "B.C." refers to BC Hydro service territory.

BC Hydro

333 Dunsmuir Street, Vancouver
British Columbia, Canada V6B 5R3

A downloadable version of this information is available at:

bchydro.com/quickfacts

Operating Statistics

For the years ended as at March 31

	2010	2009
Customers		
Residential	1,633,558	1,606,156
Light industrial and commercial	193,522	191,286
Large industrial	163	162
Other	3,455	3,434
Trade	287	290
Total	1,830,985	1,801,328

Electricity sold (gigawatt hours)

Residential	17,593	17,861
Light industrial and commercial	17,811	18,265
Large industrial	13,020	14,303
Other energy sales	1,809	2,083
Total domestic	50,233	52,512
Trade (electricity and gas)	48,842	50,799
Total	99,075	103,311

Domestic Change Over Previous Year (%)

(4.3) (1.5)

Revenues (in millions)

Residential	\$ 1,300	\$ 1,197
Light industrial and commercial	1,133	1,054
Large industrial	485	481
Other energy sales	172	82
Total domestic	3,090	2,814
Trade	732	1,455
Total	\$ 3,822	\$ 4,269

Average revenue (per kilowatt-hour)

Residential	7.4¢	6.7¢
Light industrial and commercial	6.4	5.8
Large industrial	3.7	3.4
Other	9.5	3.9
Trade ¹	4.4	6.6

Average annual kilowatt hour

use per residential customer	10,857	11,258
Peak one-hour demand integrated system (megawatts)	9,847	10,010

Lines in service

Distribution (kilometres)	57,278	56,780
Transmission (circuit kilometres)	18,603	18,531
Number of employees ²	5,842	5,844

¹ The method used to calculate trade revenue per kWh is based on gross trade revenues.

² Includes full and part-time employees of BC Hydro and its subsidiaries.

Generating Capacity in kW

Hydroelectric*	Kilowatts (kW)
Aberfeldie.....	25,000
Alouette.....	9,000
Ash River.....	28,000
Bridge River.....	478,000
Cheakamus.....	158,000
† Clayton Falls.....	2,002
Clowhom.....	33,000
Elk River.....	12,000
Falls River.....	7,000
V GM Shrum.....	2,730,000
John Hart.....	126,000
Jordan.....	170,000
Kootenay Canal.....	583,000
Ladore.....	47,000
La Joie.....	25,000
R Lake Bunzten.....	72,800
Mica.....	1,805,000
V Peace Canyon.....	694,000
R Puntledge.....	24,000
V Revelstoke.....	1,980,000
Ruskin.....	105,000
R Seton.....	48,000
Seven Mile.....	805,000
R Shuswap.....	6,000
Spillimacheen.....	4,000
V R Stave Falls.....	91,000
R Strathcona.....	64,000
R Wahleach.....	65,000
Walter Hardman.....	8,000
Whatshan.....	54,000
	10,258,802

* Maximum sustained generating capacity

R Has recreational area

V Has visitor centre

† Non-integrated area

Thermal

Burrard.....	950,000
Fort Nelson.....	47,000
Prince Rupert.....	46,000
	1,043,000

Diesel Generation

† Ah-Sin-Heek.....	6,580
† Anahim Lake.....	3,650
† Atlin.....	2,650
† Bella Bella.....	3,300
† Dease Lake.....	3,450
† Eddontenajon.....	2,550
† Masset.....	12,945
† Sandspit.....	9,150
† Telegraph Creek.....	1,800
	46,075

Total Capacity.....11,345,377

Generation capacity figures may vary slightly from those stated in BC Hydro's Annual Report due to recent plant upgrades/updates.



Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

February 18, 2011

Re: First Nation Workshops on the development of BC Hydro's Integrated Resource Plan

On January 31, 2011, we wrote to invite you to one of the regional workshops that BC Hydro is holding in March 2011 on the development of the Integrated Resource Plan. The Integrated Resource Plan is a 20-year, province-wide plan that describes how BC Hydro will meet future demand for electricity through such measures as energy conservation and clean energy generation. The plan will be updated every five years.

In our previous letter we committed to providing further information about the Integrated Resource Plan topics which are set out in the enclosed document with that title. The topics are:

- *Conservation and Efficiency*
- *Electricity Generation Options*
- *Electrification*
- *Transmission*
- *Export Market Potential*

BC Hydro's Integrated Resource Plan will support the Province of British Columbia to achieve the objectives contained within the *Clean Energy Act*, including the requirements for electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. As well, given the long transmission construction lead times, the plan will contain an assessment of transmission requirements looking out 30 years into the future.

BC Hydro is seeking to consult with all First Nations, Tribal Councils, stakeholders and the public on both the development of Integrated Resource Plan and the draft Integrated Resource Plan. BC Hydro will be holding two rounds of regional workshops for First Nations. In the first round of workshops that will be held in March 2011, we will be seeking input into the development of the draft Integrated Resource Plan. In the second round of workshops, which will be held in the fall, we will be seeking your feedback on the draft Integrated Resource Plan. In addition, BC Hydro will invite written comments from First Nations following each of the two rounds of regional workshops.

BC Hydro is providing participant funding to First Nations and Tribal Councils to attend the First Nations-only workshops. Participant funding of \$250.00/person is available for two designated representatives from each First Nation and Tribal Council to attend a First Nation workshop in both rounds 1 and 2. BC



Hydro will also reimburse eligible travel expenses for all designated representatives who attend a First Nation workshop in the region where their First Nation or Tribal Council office is located. The input received from First Nations will be summarized in a consultation report that will be submitted to the Provincial Government in November 2011 as part of the Integrated Resource Plan.

In addition to the First Nations regional workshops BC Hydro also invites First Nations to attend stakeholder meetings and public open houses on the Integrated Resource Plan. (the schedule for these sessions is also enclosed). Please note that participant and travel funding is not available to attend the stakeholder meetings and public open houses. Pre-registration is required for the stakeholder meetings and space is limited. To register for a stakeholder meeting please contact us at the email address or telephone number below.

Also enclosed are the following documents which were included in our previous letter:

- A First Nations Workshop Schedule and Registration Form
- Travel Funding Guidelines and a Travel Expense Claim Form
- An Integrated Resource Plan Information Sheet,
- Quick Facts on BC Hydro and the provincial electricity system

Information updates will be posted on the BC Hydro website throughout the development of the Integrated Resource Plan and we encourage you to visit www.bchydro.com/irp

It is important to note that the consultation on the Integrated Resource Plan does not replace the consultation that BC Hydro undertakes on capital projects. Consultation on the Integrated Resource Plan represents very early consultation at the long-term planning phase. Understanding First Nations interests in energy and transmission development, both from a place of aboriginal rights as well as economic development plans, will be very useful input to shape BC Hydro's Integrated Resource Plan.

We look forward to your participation and hearing your input into the development of the Integrated Resource Plan. If you have any questions, please do not hesitate to email us at 2011IRP@bchydro.com or call 1-877-461-0161 extension 3.

Sincerely,



Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations



INTEGRATED RESOURCE PLAN TOPICS

BC Hydro's Electricity System

Currently BC Hydro serves 1.8 million customers in an area containing more than 94 per cent of British Columbia's population. BC Hydro provides electricity through an interconnected network of transmission lines, distributions lines and substations. This interconnected network, or "integrated grid" connects our generating stations to one another and to our customers. In addition, BC Hydro serves some communities that are not connected to the integrated grid.

Approximately 85 per cent of British Columbia's domestic supply comes from generation resources owned and operated by BC Hydro. The remaining 15 per cent of our customers' electricity needs are met from power purchased from Independent Power Producers in British Columbia. The majority of B.C.'s electricity demand is located in the Lower Mainland and on Vancouver Island while the majority of the generation supply is located in remote areas of the province. This requires BC Hydro to move the electricity over long distances across rugged terrain, through a relatively small number of transmission lines. More than 93 per cent of BC Hydro's electricity supply is from renewable resources and creates very little greenhouse gases, making it desirable at a time when the world faces climate change.

Integrated Resource Planning

The Integrated Resource Plan is BC Hydro's long-term plan for acquiring the resources to meet customers' needs for the next 20 years. As BC Hydro plans to meet British Columbia's future electricity needs it must consider the following:

British Columbians' electricity needs over the next 20 years

BC Hydro's Electricity Load Forecast indicates demand for electricity will increase by approximately 40 per cent in the next 20 years before accounting for savings that can be achieved through conservation and efficiency. Trends that influence future electricity needs include economic growth, population growth as well as predictions on how electricity use will change as a result of changes in lifestyle, electricity rates, legislation and technology.

The "gap" between existing supply and forecasted electricity demand

BC Hydro assesses how much electricity it can produce and rely upon from its current generating facilities and existing contracts with Independent Power Producers. Even after the future increase in demand for electricity is adjusted to account for savings from BC Hydro's current conservation and efficiency plan, an energy gap between future electricity needs and current resources still exists, particularly after 2020. The planning challenge begins with the task of how best to fill the gap.

***How the gap between future electricity needs and existing resources can be closed***

As we examine how to close the gap, BC Hydro considers:

- How much savings can be achieved from conservation and efficiency?
- What portfolio of electricity generation options BC Hydro should plan on?
- How much electrification will contribute to growth in electricity demand?
- What the transmission requirements will be?
- What the export market potential may be?

BC Hydro is seeking input from First Nations, stakeholders and the public on the following topics:

Conservation and Efficiency: Conservation – often referred to as demand side management – is BC Hydro’s first strategy for closing the gap between future electricity demands and existing resources. The latest forecasts show that demand for electricity in British Columbia will grow by approximately 40 per cent over the next 20 years.

Conservation occurs when customers change their behaviours, business operations, equipment purchases or capital investment decisions in ways that reduce electricity use. Methods of conservation include programs, electricity rates and government regulations designed to encourage or require customers to conserve electricity. The current conservation and efficiency plan is designed to reduce the forecast growth in demand by 79 per cent by 2020. This is above the new *Clean Energy Act* target of 66 per cent. One of the important questions in the Integrated Resource Plan is whether BC Hydro should target additional savings from conservation and efficiency over and above our current significant plan.

From a planning perspective, it is difficult to guarantee a particular volume of conservation over time as it is dependent upon customer response. Depending on what combination of conservation and efficiency measures are undertaken, BC Hydro can target different levels of savings. For this Integrated Resource Plan BC Hydro is evaluating a range of options that could provide savings of between 66 per cent and 83 per cent of the gap between current capacity and anticipated demand for electricity.

2. Electricity Generation Options: While British Columbians are doing more than ever to conserve electricity, electricity use is expected to continue to increase over the coming decades. BC Hydro will develop and analyze various combinations of resource options (portfolios) that may be used to meet future electricity needs and clean energy objectives. Each portfolio is described in terms of the resources it would contain.

Electricity generation options under consideration include a combination of BC Hydro projects, such as the Site C Clean Energy Project on the Peace River, as well as electricity purchases from potential projects representing a range of resource types including: biomass, wind, run-of-river and natural gas.



3. Electrification: Electrification describes the process of switching from other fuel sources to electricity; for example, switching vehicles from petroleum to electricity. Efficient electrification is one way of supporting the province's greenhouse gas emission reduction targets. The transportation sector is the largest source of greenhouse gas emissions in B.C., and replacing vehicles that use gasoline and diesel with electric vehicles could be one of the most significant long-term actions British Columbians could take to reduce emissions.

BC Hydro currently does not encourage fuel switching; rather it responds to the fuel switching that occurs. As part of the Integrated Resource Plan, BC Hydro is considering how it needs to respond to forecast growth in electricity demand from electrification and what role it should play in electrification going forward. For example, it could take a more proactive approach, working with government and other partners to promote and encourage efficient electrification to benefit customers and reduce greenhouse gas emissions.

4. Transmission: The transmission system, the essential link between electrical generators and energy consumers, is planned and designed to deliver energy efficiently and reliably. Because transmission lines require long lead times to plan and construct, the Integrated Resource Plan will assess electricity demand forecasts and the transmission options that will most effectively meet those demands over the next 30 years. When assessing future transmission requirements, planners need to consider:

- The need to maintain an optimal level of reliability for customers;
- Growth in electricity demand by geographic area;
- Potential location and size of new generation resources;
- The need to minimize electricity losses that occur when electricity is carried over long distances; and
- The expected retirement or refurbishment of existing transmission resources.

Transmission systems typically have been planned in response to generation projects and electricity demand growth that are expected to occur. In this Integrated Resource Plan BC Hydro is now looking farther into the future to anticipate potential transmission needs over a 30 year horizon. While BC Hydro is likely to use both approaches going forward, emphasis can be placed on one or the other.

5. Export Market Potential: While BC Hydro currently trades electricity when it has a short-term surplus, the *Clean Energy Act* includes the objective that the province be a net exporter of clean and renewable power. The Integrated Resource Plan will assess the export market potential, including the share of the clean energy market that British Columbia could expect to capture, and make recommendations to the provincial government about what actions, if any, are required now.



**Integrated Resource Plan
First Nations Workshop Schedule & Registration**

Please send registration to the attention of **Loretta James**

Phone: 1.877.461.0161 ext 3

Email: 2011irp@bchydro.com

Fax: 604.528.2822

Community	Date	Time	Location
Nanaimo	March 2, 2011	9:00am-3:00pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
Campbell River	March 3, 2011	9:00am-3:00pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Abbotsford	March 4, 2011	9:00am-3:00pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070
Kamloops	March 7, 2011	9:00am-3:00pm	Coast Canadian Inn 339 Paul Street - 250.372.5201
Vancouver	March 11, 2011	9:00am-3:00pm	SFU Segal Centre, Rix Room 500 Granville Street - 778.782.5000
Terrace	March 14, 2011	9:00am-3:00pm	Terrace Best Western 4553 Greig Avenue - 250.635.0083
Fort St. John	March 16, 2011	9:00am-3:00pm	Quality Inn Northern Grand 9830 100th Avenue - 250.787.0521
Prince George	March 17, 2011	9:00am-3:00pm	Coast Inn of the North 770 Brunswick Street - 250.563.0121
Castlegar	March 21, 2011	9:00am-3:00pm	Fireside Inn 1810 8th Avenue - 250.365.2128

PLEASE PRINT CLEARLY

Workshop Community _____

First Nation, Tribal Council _____

1. _____ 2. _____

Designated Representatives (eligible for participant funding)

Additional Participants (not eligible for participant funding)

Phone _____

Fax _____

Email _____



**Integrated Resource Plan
Travel Expense Claim Form**

ELIGIBLE EXPENSES

Dinner per diem – continental breakfast and lunch will be provided at the workshop	\$26.00
Mileage – from the First Nation, Tribal Council or First Nation Organization Office to the nearest consultation workshop. Applicable for travel of 25 km or more.	\$0.52 per kilometre
Hotel Accommodation – Applicable when travelling more than 50 km and subject to providing a receipt	\$125.00
Airfare – If you are unable to attend a session in your region please check with our office regarding costs to be reimbursed, prior to booking travel	Full cost of an economy class ticket

Name (please print): _____

First Nation (please print): _____

Detail of Expenses	Amount
TOTAL	

I hereby certify that all expenses claimed were incurred to attend BC Hydro’s Integrated Resource Plan First Nations workshop

Workshop Location & Date

Signature of Claimant

Date Signed

Reimbursement cheques for Travel Expenses will be issued to the applicable First Nation, Tribal Council, or First Nation Organization. Please return this completed form with applicable receipts attached, by mail or fax to:

ATTN: Loretta James Fax: 604.528.2822 Tel: 1.877.461.0161 extension 3
BC Hydro, Aboriginal Relations and Negotiations
6911 Southpoint Drive – 10th Floor
Burnaby, BC V3N 4X8



Integrated Resource Plan Consultation Schedule

First Nations Workshops			
<i>Participant funding available for 2 designated representatives of each First Nation & Tribal Council</i>			
Community	Date	Time	Location
Nanaimo	March 2, 2011	9:00am-3:00pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
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Castlegar	March 21, 2011	9:00am-3:00pm	Fireside Inn 1810 8th Avenue - 250.365.2128

Stakeholder Meeting & Public Open Houses			
<i>No participant funding available to attend the stakeholder or public sessions</i>			
Community	Date	Type & Time	Location
Victoria	March 9, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Hotel Grand Pacific, 463 Belleville Street
Campbell River	March 10, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Coast Discovery Inn & Marina, 975 Shoppers Row
Vancouver	March 15, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	SFU Morris J Wosk Centre, Room 420, 580 West Hastings SFU Harbour Centre, Segal Room, 515 West Hastings
Abbotsford	March 16, 2011	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	Clearbrook Community Centre, 2825 Clearbrook Road
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Integrated Resource Plan – Information Sheet

Why are we developing the Integrated Resource Plan?

While British Columbians are doing more than ever to conserve electricity, B.C.'s overall electricity use is expected to continue to increase as a result of projected population growth and projected development in the energy-intensive industrial sector. BC Hydro forecasts that the province's electricity needs will grow by 20 to 40 per cent over the next 20 years. The Integrated Resource Plan is BC Hydro's long-term plan for acquiring the resources needed to meet customers' needs for the next 20 years

What objectives will the Integrated Resource Plan address?

BC Hydro's Integrated Resource Plan will support the province in meeting the objectives contained within the *Clean Energy Act*, including achieving electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. As well, given long transmission construction lead times, the plan will contain an assessment of transmission requirements looking 30 years out. As BC Hydro implements the long-term vision contained in the *Clean Energy Act*, the fundamental electricity planning objectives to provide customers with reliable power in a cost-effective manner continue to be central to the planning process and reflective of good utility practice.

What is B.C.'s Clean Energy Act?

B.C.'s new *Clean Energy Act* establishes a long-term vision for B.C. to become a clean energy leader. The Act guides government, BC Hydro and the British Columbia Utilities Commission in advancing the province's ambitious sustainable energy vision. The Act advances 16 specific energy objectives. BC Hydro's Integrated Resource Plan will support the province in achieving the objectives contained within the *Clean Energy Act*, including achieving electricity self-sufficiency, promoting economic development, reducing greenhouse gas emissions, exploring potential export market opportunities, and investing in new clean and renewable energy. For more information on the *Clean Energy Act* please visit:

bchydro.com/news/articles/press_releases/2010/new_act_powers_bc_forward.html

How will BC Hydro meet future electricity requirements?

BC Hydro's core strategy to meet future electricity requirements is to 'conserve, build and buy'. Conservation is the first priority, and is targeted to meet approximately two-thirds of B.C.'s future electricity needs, as per the *Clean Energy Act*. Building a sustainable future also includes reinvesting in heritage hydroelectric assets, exploring new clean energy infrastructure projects such as Site C, and acquiring renewable energy from independent clean energy producers.

What are the key topics related to the development of the Integrated Resource Plan?

The key topics for the Integrated Resource Plan include conservation options, electricity generation options, long-range transmission options, the potential for electrification (switching from other fuel sources to electricity, such as may happen in the transportation sector), and the potential market opportunity to export clean power.

If I have questions about the Integrated Resource Plan and the related consultation what should I do?

Details of how to get involved in the First Nations consultation workshops or the public open houses is available by calling us at 1.877.461.0161 extension 3, or on the BC Hydro website at: bchydro.com/irp

Where can I get further information about BC Hydro?

Each year BC Hydro prepares *Quick Facts* which summarized information on BC Hydro's operations for the year. The *Quick Facts* provides an overview of the corporate purpose, annual facts, financial information, and operating statistics.

If you would like to know more about opportunities, such as contracting and employment, please call 1-877-461-0161 or visit us online at: bchydro.com/community/aboriginal_relations.html

QUICK FACTS



FOR THE YEAR ENDED MARCH 31, 2010

Corporate Purpose

BC Hydro's corporate purpose is to provide reliable power, at low cost, for generations.

Our Business

BC Hydro is a commercial Crown corporation owned by the Province of British Columbia. BC Hydro is one of North America's leading providers of clean, renewable energy, and the largest electric utility in British Columbia, serving approximately 95 per cent of the province's population and approximately 1.8 million customers.

We are responsible for reliably generating between 42,000 and 52,000 gigawatt hours (GWh) of electricity. Electricity is delivered to our customers through a network of over 18,000 kilometres of transmission lines and 57,000 kilometres of distribution lines.

2010 Facts

- Net income was \$447 million, compared with \$365 million the year before, resulting in a return on equity of 12.49 per cent.
- Water inflows were five per cent lower than the prior year resulting in less hydro generation than in the prior year, which was partially offset by reduced domestic load requirements, primarily as a result of lower sales to large industrial customers impacted by the economic downturn during the year.
- Power Smart conservation programs continued to deliver cost-effective energy, producing cumulative annual energy savings of 1,778 GWh in fiscal 2010.
- Property, plant and equipment expenditures of \$2,406 million are 72 per cent higher than the prior year primarily due to BC Hydro's acquisition of a one-third interest in Teck Metals Ltd.'s Waneta Dam and generating facility in March 2010, the Vancouver Island Transmission Reinforcement project, Revelstoke Unit 5 installation and system improvements to the distribution network. This is a positive result given the significant capital expenditure requirements over the next several years to be able to meet load growth requirements and maintain aging infrastructure.

Energy Facts

Definitions

power = how much electricity is consumed by customers (or produced by power generators) at any instant in time

energy = how much is consumed (or produced) over a period of time

capacity = the maximum sustainable amount of energy that can be produced or carried at any instant. Example: a car engine's horsepower rating is its energy capacity

Units of power

- 1 kilowatt (kW) = 1,000 watts
- 1 megawatt (MW) = 1,000 kilowatts (or 1 million watts)
- 1 gigawatt (GW) = 1,000 megawatts (or 1 billion watts)

Units of energy

- 1 kilowatt hour (kWh) = 1,000 watts for 1 hour (1,000 watt hours)
- 1 megawatt hour (MWh) = 1,000 kWh
- 1 gigawatt hour (GWh) = 1,000 MWh

(Note that the abbreviations for prefixes follow metric convention, so kilo is k, while mega and giga are capitalized. The abbreviation for watt is W.)

Power to Energy ratios – rule of thumb

- Power to energy – for thermal electric: MW x 8 = GWh per year
- Power to energy – for large hydro: MW x 5 = GWh per year

Comparison statistics

- The average household in BC Hydro's service area uses about 11,000 kWh per year.
- A large industrial customer, such as a pulp mill, might use 400 GWh in a year, equal to the consumption of 40,000 households.
- A typical large office building of 20–25 storeys might consume 5 GWh in a year, equal to the consumption of 500 households.
- A large "big box" retail outlet might consume 3.5 GWh per year, or roughly the equivalent of 350 households.
- A 1 MW micro hydro plant produces about 5 GWh per year of green energy.

Financial Information
(in millions)

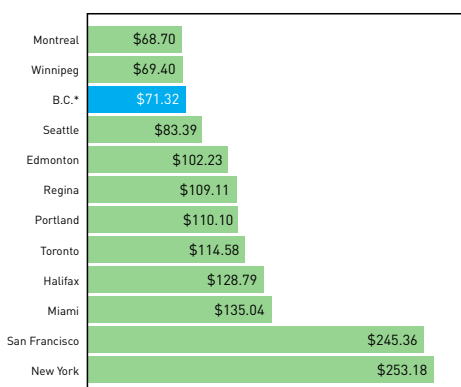
For the years ended as at March 31

	2010	2009
Revenues	\$ 3,822	\$ 4,269
Net income	\$ 447	\$ 365
Property, plant and equipment and intangible assets	\$ 14,104	\$ 12,099
Property, plant and equipment and intangible additions	\$ 2,406	\$ 1,397
Net long-term debt ¹	\$ 10,696	\$ 9,135

¹Consists of long-term debt, including the current portion, net of sinking funds and cash and cash equivalents.

Residential Rates

Monthly \$ Bills per 1,000 KWh



Source: "Comparison of Electricity Prices in Major North American Cities—Rates Effective on April 1, 2010"—Hydro Quebec.

Note: All bills and average rates are in Canadian currency and exclude taxes. "B.C." refers to BC Hydro service territory.

BC Hydro

333 Dunsmuir Street, Vancouver
British Columbia, Canada V6B 5R3

A downloadable version of this information is available at:

bchydro.com/quickfacts

Operating Statistics

For the years ended as at March 31

	2010	2009
Customers		
Residential	1,633,558	1,606,156
Light industrial and commercial	193,522	191,286
Large industrial	163	162
Other	3,455	3,434
Trade	287	290
Total	1,830,985	1,801,328

Electricity sold (gigawatt hours)

Residential	17,593	17,861
Light industrial and commercial	17,811	18,265
Large industrial	13,020	14,303
Other energy sales	1,809	2,083
Total domestic	50,233	52,512
Trade (electricity and gas)	48,842	50,799
Total	99,075	103,311

Domestic Change Over Previous Year (%)

(4.3) (1.5)

Revenues (in millions)

Residential	\$ 1,300	\$ 1,197
Light industrial and commercial	1,133	1,054
Large industrial	485	481
Other energy sales	172	82
Total domestic	3,090	2,814
Trade	732	1,455
Total	\$ 3,822	\$ 4,269

Average revenue (per kilowatt-hour)

Residential	7.4¢	6.7¢
Light industrial and commercial	6.4	5.8
Large industrial	3.7	3.4
Other	9.5	3.9
Trade ¹	4.4	6.6

Average annual kilowatt hour

use per residential customer	10,857	11,258
Peak one-hour demand integrated system (megawatts)	9,847	10,010

Lines in service

Distribution (kilometres)	57,278	56,780
Transmission (circuit kilometres)	18,603	18,531
Number of employees ²	5,842	5,844

¹ The method used to calculate trade revenue per kWh is based on gross trade revenues.

² Includes full and part-time employees of BC Hydro and its subsidiaries.

Generating Capacity in kW

Hydroelectric*	Kilowatts (kW)
Aberfeldie.....	25,000
Alouette.....	9,000
Ash River.....	28,000
Bridge River.....	478,000
Cheakamus.....	158,000
† Clayton Falls.....	2,002
Clowhom.....	33,000
Elk River.....	12,000
Falls River.....	7,000
V GM Shrum.....	2,730,000
John Hart.....	126,000
Jordan.....	170,000
Kootenay Canal.....	583,000
Ladore.....	47,000
La Joie.....	25,000
R Lake Bunzten.....	72,800
Mica.....	1,805,000
V Peace Canyon.....	694,000
R Puntledge.....	24,000
V Revelstoke.....	1,980,000
Ruskin.....	105,000
R Seton.....	48,000
Seven Mile.....	805,000
R Shuswap.....	6,000
Spillimacheen.....	4,000
V R Stave Falls.....	91,000
R Strathcona.....	64,000
R Wahleach.....	65,000
Walter Hardman.....	8,000
Whatshan.....	54,000
	10,258,802

* Maximum sustained generating capacity

R Has recreational area

V Has visitor centre

† Non-integrated area

Thermal

Burrard.....	950,000
Fort Nelson.....	47,000
Prince Rupert.....	46,000
	1,040,500

Diesel Generation

† Ah-Sin-Heek.....	6,580
† Anahim Lake.....	3,650
† Atlin.....	2,650
† Bella Bella.....	3,300
† Dease Lake.....	3,450
† Eddontenajon.....	2,550
† Masset.....	12,945
† Sandspit.....	9,150
† Telegraph Creek.....	1,800
	46,075

Total Capacity.....11,345,377

Generation capacity figures may vary slightly from those stated in BC Hydro's Annual Report due to recent plant upgrades/updates.



Sheila Reynolds
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

May 7, 2012

Chief X
First Nation
Street
City Prov Postal

Sent by fax & mail: xxx.xxx.xxxx

Re: First Nation Workshops on BC Hydro's Draft Integrated Resource Plan

Dear Chief xxx,

The Integrated Resource Plan is a long-term, province-wide strategic plan that describes how BC Hydro will meet future growth in demand for electricity through such measures as energy conservation and clean energy generation. BC Hydro is required by the provincial Clean Energy Act to update the Integrated Resource Plan every five years.

In March 2011, we hosted First Nations at regional workshops across BC to inform them about the Integrated Resource Plan, and asked for input on specific planning topics. The topics covered at these workshops were:

- *Conservation and Efficiency*
- *Electricity Generation Options*
- *Electrification*
- *Transmission*
- *Export Market Potential*

The input received from First Nations was presented in the *BC Hydro Integrated Resource Plan First Nations Consultation Interim Report* (posted at www.bchydro.com/irp), and considered by BC Hydro in developing the draft Integrated Resource Plan.

Between June 26 and July 13, 2012, we will be holding a second round of regional workshops to present and invite feedback from First Nations on the draft Integrated Resource Plan, and we will be inviting written comments from First Nations up to August 13, 2012. The feedback we receive on the draft Integrated Resource Plan will be considered by BC Hydro in finalizing it prior to submission by December 2012 to the Provincial Government for approval.

BC Hydro is providing participant funding to First Nations and Tribal Councils to attend the regional workshops that are being specifically scheduled for First Nations. Participant funding of \$250.00/person is available for two designated representatives from each First Nation and Tribal Council to attend one regional workshop. BC Hydro will also reimburse eligible travel expenses for all designated representatives who attend a First Nation workshop in the region where their First Nation or Tribal Council office is located. The feedback received from First Nations will be summarized in a consultation report that will accompany the final Integrated Resource Plan when it is submitted to government at the end of the year.



In addition to the First Nations-only regional workshops BC Hydro also invites First Nations to attend stakeholder meetings and public open houses on the draft Integrated Resource Plan. Please note that participant and travel funding is not available to attend the stakeholder meetings and public open houses. Pre-registration is required for the stakeholder meetings and space is limited. To register for a stakeholder meeting, please contact us at the email address or telephone number below.

Enclosed are the following documents:

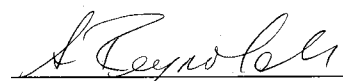
- Schedule of First Nations-only regional workshops, stakeholder meetings and public open houses
- Registration Form for First Nations-only regional workshops
- Travel Expense and Participant Funding Claim Form. Travel Funding Guidelines are included

On May 28, 2012, you will be able to access the draft Integrated Resource Plan at www.bchydro.com/irp for your review in advance of the regional workshop. Also available on the website at that time, will be a Consultation Discussion Guide that will describe major aspects of the draft Integrated Resource Plan, including the recommended actions.

It is important to note that the consultation on the Integrated Resource Plan does not replace the consultation that BC Hydro undertakes on capital projects. Consultation on the Integrated Resource Plan represents very early consultation at the long-term planning phase. Understanding First Nations interests in energy and transmission development, both from a place of aboriginal rights as well as economic development plans, is important input into BC Hydro's Integrated Resource Plan.

If you have any questions, please do not hesitate to email us at 2012IRP@bchydro.com or call 1-877-461-0161 extension 3.

Sincerely,



Sheila Reynolds
Manager, Aboriginal & Corporate Relations
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations



**Integrated Resource Plan
 First Nations Workshop Registration**

Please send registration to the attention of **Loretta James**
Phone: 1.877.461.0161 extension 3 **Email:** 2012irp@bchydro.com **Fax:** 604.528.2822

PLEASE PRINT CLEARLY

Workshop Community: _____ Workshop Date: June/July ____ 2012

First Nation, Tribal Council

1. _____ 2. _____
 Designated Representatives (eligible for participant funding)

Additional Participants (not eligible for participant funding)

Phone

Fax

Email

First Nation Workshop Dates

Community	Date	Time	Location
Campbell River	June 26, 2012	8:30am-2:30pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Nanaimo	June 27, 2012	8:30am-2:30pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
Fort St. John	July 5, 2012	8:30am-2:30pm	Quality Inn Northern Grand 9830 100th Avenue - 250.787.0521
Prince George	July 6, 2012	8:30am-2:30pm	Coast Inn of the North 770 Brunswick Street - 250.563.0121
Kamloops	July 9, 2012	8:30am-2:30pm	Kamloops Convention Centre 1250 Rogers Way - 250.372.5312
Terrace	July 11, 2012	8:30am-2:30pm	Terrace Best Western 4553 Greig Avenue - 250.635.0083
Vancouver	July 12, 2012	8:30am-2:30pm	SFU School of Business, Rix Room 500 Granville Street - 778.782.5000
Abbotsford	July 13, 2012	8:30am-2:30pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070



Integrated Resource Plan Consultation Schedule

First Nations Workshops			
<i>Participant funding available for 2 designated representatives of each First Nation & Tribal Council</i>			
Community	Date	Time	Location
Campbell River	June 26, 2012	8:30am-2:30pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Nanaimo	June 27, 2012	8:30am-2:30pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
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Abbotsford	July 13, 2012	8:30am-2:30pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070

Stakeholder Meeting & Public Open Houses			
<i>No participant funding available to attend the stakeholder or public sessions</i>			
Community	Date	Type & Time	Location
Vernon	May 29	Stakeholder Meeting - 1:00-4:00pm	The Prestige Hotel & Conference Centre Vernon
Kamloops	May 30	Stakeholder Meeting - 1:00-4:00pm	Kamloops Convention Centre
Cranbrook	May 31	Stakeholder Meeting - 1:00-3:00pm	Prestige Rocky Mountain Resort
Prince George	June 5	Stakeholder Meeting - 1:00-:00pm Public Open House - 6:00-9:00pm	Prince George Ramada
Fort St John	June 6	Stakeholder Meeting - 1:00-4:00pm Public Open House - 6:00-9:00pm	Quality Inn Northern Grand
Surrey	June 7	Stakeholder Meeting - 1:00-5:00pm	Sheraton Vancouver Guildford Hotel
Vancouver	June 12	Stakeholder Meeting - 1:00-4:00pm Public Open House - 5:00-9:00pm	SFU Vancouver Segal Graduate School of Business
Abbotsford	June 13	Stakeholder Meeting - 1:00-4:00pm Public Open House - 6:00-9:00pm	Abbotsford Ramada Plaza and Conference Centre
Terrace	June 14	Stakeholder Meeting - 1:00-4:00pm Public Open House - 6:00-9:00pm	Terrace Best Western Inn
Campbell River	June 19	Stakeholder Meeting - 1:00-3:00pm	Coast Discovery Inn & Marina
Victoria	June 20	Stakeholder Meeting - 1:00-3:00pm Public Open House - 6:00-9:00pm	Victoria Marriott Inner Harbour Hotel
Castlegar	June 21	Stakeholder Meeting - 1:00-3:00pm	Castlegar & District Community Centre



**Integrated Resource Plan
 Travel Expense & Participant Funding Claim Form**

ELIGIBLE EXPENSES

Dinner per diem – continental breakfast and lunch will be provided at the workshop	\$26.00
Mileage – Applicable for travel of 25 km or more.	\$0.52 per kilometre
Hotel Accommodation – Applicable when travelling more than 50 km and subject to providing a receipt	\$125.00
Airfare - If you are unable to attend a session in your region please check with our office regarding eligible reimbursement cost, prior to booking travel. Airfare reimbursements require a receipt and boarding pass with expense claim.	Full cost of an economy class ticket

Name (please print): _____

First Nation (please print): _____

Detail of Claim	Amount
Participant Funding	\$250
TOTAL	

I hereby certify that all expenses claimed were incurred to attend BC Hydro’s Integrated Resource Plan First Nations workshop.

Workshop Location & Date

Signature of Claimant

Date Signed

Reimbursement cheques for Travel Expenses & Participant Funding will be issued to the applicable First Nation, Tribal Council, or First Nation Organization. Please return this completed form with applicable receipts attached, by mail, fax, or email to:

ATTN: Loretta James f: 604.528.2822 e: 2012irp@bchydro.com
 BC Hydro, Aboriginal Relations and Negotiations
 6911 Southpoint Drive – 10th Floor, Burnaby, BC V3N 4X8
 1.877.461.0161 extension 3



Sheila Reynolds
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

May 28, 2012

«Chief»
«LetterName»
«Street»
«CityProv» «Postal»

Sent by fax & mail: «Fax»

Re: First Nation Workshops on BC Hydro's Draft Integrated Resource Plan

Dear «Chief»,

On May 7, 2012, we wrote to invite you to a regional workshop on the draft Integrated Resource Plan. The workshops will be held in June and July 2012 and the workshop schedule is included in this package.

The Integrated Resource Plan is BC Hydro's plan for acquiring the resources to meet customer needs over the long term. The draft Integrated Resource Plan describes the actions BC Hydro recommends to meet growing demand so that our customers will continue to receive affordable, clean and reliable electricity. In developing the draft plan, BC Hydro considered the input gathered in 2011 from First Nations, stakeholder and public consultation.

BC Hydro is seeking First Nations' feedback on major aspects of the draft Plan and will consider this feedback, along with technical, financial, environmental and economic development inputs, when preparing a final Integrated Resource Plan. The plan will be submitted to the provincial government by December 2012, after which government will review the Plan and decide whether to approve it. The feedback received from First Nations will be summarized in a consultation report that will accompany the Integrated Resource Plan when it is submitted to government.

BC Hydro is providing participant funding to First Nations and Tribal Councils to attend the regional workshops. Participant funding of \$250.00/person is available for two designated representatives from each First Nation and Tribal Council to attend one regional workshop. BC Hydro will also reimburse eligible travel expenses for all designated representatives who attend a First Nation workshop in the region where their First Nation or Tribal Council office is located.

In addition to the First Nations-only regional workshops BC Hydro also invites First Nations to attend public open houses and stakeholder meetings on the draft Integrated Resource Plan. Please note that participant and travel funding is not available to attend the public open houses or stakeholder meetings. Pre-registration is required for the stakeholder meetings and space is limited. To register, please contact us at the email address or telephone number below.



Enclosed in this package are the following documents:

- Schedule of First Nations regional workshops, stakeholder meetings and public open houses
- Registration Form for First Nations regional workshops
- Travel Expense and Participant Funding Claim Form. Travel Funding Guidelines are included.
- Integrated Resource Plan: Executive Summary
- Summary of comments submitted by First Nation participants in the March 2011 workshops

You can access the draft Integrated Resource Plan, the Executive Summary of the draft Plan, and the Discussion Guide online at www.bchydro.com/irp. The Discussion Guide describes major aspects of the draft Integrated Resource Plan, including the recommended actions, and will be used to inform our discussions at the workshop.

It is important to note that the consultation on the Integrated Resource Plan does not replace the consultation that BC Hydro undertakes on capital projects. Consultation on the Integrated Resource Plan represents consultation at the long-term planning phase. Understanding First Nations interests in energy and transmission development, both from a place of aboriginal rights as well as economic development plans, is important input into BC Hydro's Integrated Resource Plan.

If you have any questions, please do not hesitate to email us at 2012IRP@bchydro.com or call 1-877-461-0161 extension 3. Additional information on the Integrated Resource Plan is available on BC Hydro's website at www.bchydro.com/irp

Sincerely,



Sheila Reynolds
Manager, Aboriginal & Corporate Relations
BC Hydro Aboriginal Relations & Negotiations



Integrated Resource Plan Consultation Schedule

First Nations Workshops *Please Note Kamloops Start Time			
<i>Participant funding available for 2 designated representatives of each First Nation & Tribal Council</i>			
Community	Date	Time	Location
Campbell River	June 26, 2012	8:30am-2:30pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Nanaimo	June 27, 2012	8:30am-2:30pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
Fort St. John	July 5, 2012	8:30am-2:30pm	Quality Inn Northern Grand 9830 100th Avenue - 250.787.0521
Prince George	July 6, 2012	8:30am-2:30pm	Coast Inn of the North 770 Brunswick Street - 250.563.0121
Kamloops	July 9, 2012	*8:00am-2:00pm	Kamloops Convention Centre 1250 Rogers Way - 250.372.5312
Terrace	July 11, 2012	8:30am-2:30pm	Terrace Best Western 4553 Greig Avenue - 250.635.0083
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Abbotsford	July 13, 2012	8:30am-2:30pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070

Stakeholder Meeting & Public Open Houses			
<i>No participant funding available to attend the stakeholder or public sessions</i>			
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Campbell River	June 19	Stakeholder Meeting - 1:00-3:00pm	Coast Discovery Inn & Marina
Victoria	June 20	Stakeholder Meeting - 1:00-3:00pm Public Open House - 6:00-9:00pm	Victoria Marriott Inner Harbour Hotel
Castlegar	June 21	Stakeholder Meeting - 1:00-3:00pm	Castlegar & District Community Centre



Integrated Resource Plan First Nations Workshop Registration

Please send registration to the attention of **Loretta James**
Phone: 1.877.461.0161 extension 3 **Email:** 2012irp@bchydro.com **Fax:** 604.528.2822

PLEASE PRINT CLEARLY

Workshop Community: _____ Workshop Date: June/July ____ 2012

First Nation, Tribal Council

1. _____ 2. _____
 Designated Representatives (eligible for participant funding)

Additional Participants (not eligible for participant funding)

Phone

Fax

Email

First Nation Workshop Dates *Please Note Kamloops Start Time

Community	Date	Time	Location
Campbell River	June 26, 2012	8:30am-2:30pm	Coast Discovery Inn & Marina 975 Shoppers Row - 250.287.7155
Nanaimo	June 27, 2012	8:30am-2:30pm	Vancouver Island Convention Centre 101 Gordon Street - 250.244.4050
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Abbotsford	July 13, 2012	8:30am-2:30pm	Ramada Inn & Conference Centre 36035 North Parallel Road – 1.888.411.1070



**Integrated Resource Plan
 Travel Expense & Participant Funding Claim Form**

ELIGIBLE EXPENSES

Dinner per diem – continental breakfast and lunch will be provided at the workshop	\$26.00
Mileage – Applicable for travel of 25 km or more.	\$0.52 per kilometre
Hotel Accommodation – Applicable when travelling more than 50 km and subject to providing a receipt	\$125.00
Airfare - If you are unable to attend a session in your region please check with our office regarding eligible reimbursement cost, prior to booking travel. Airfare reimbursements require a receipt and boarding pass with expense claim.	Full cost of an economy class ticket

Name (please print): _____

First Nation (please print): _____

Detail of Claim	Amount
Participant Funding	\$250
TOTAL	

I hereby certify that all expenses claimed were incurred to attend BC Hydro’s Integrated Resource Plan First Nations workshop.

Workshop Location & Date

Signature of Claimant

Date Signed

Reimbursement cheques for Travel Expenses & Participant Funding will be issued to the applicable First Nation, Tribal Council, or First Nation Organization. Please return this completed form with applicable receipts attached, by mail, fax, or email to:

ATTN: Loretta James f: 604.528.2822 e: 2012irp@bchydro.com
 BC Hydro, Aboriginal Relations and Negotiations
 6911 Southpoint Drive – 10th Floor, Burnaby, BC V3N 4X8
 1.877.461.0161 extension 3

BC HYDRO DRAFT INTEGRATED RESOURCE PLAN 2012

*A Plan to Meet B.C.'s
Future Electricity Needs*

EXECUTIVE SUMMARY May 2012



INTRODUCTION TO THE DRAFT PLAN

Electricity powers our lives — it lights our streets, heats our homes and fuels our industries. According to BC Hydro's forecast, B.C.'s electricity demand is expected to increase by about 50 per cent over the next 20 years — from economic expansion, population growth and the increased use of, or conversion to, electricity. The draft Integrated Resource Plan (IRP) details the actions BC Hydro recommends to meet growing demand so that customers will continue to receive affordable, clean and reliable electricity.

Given the long lead time necessary to build new generation facilities and transmission infrastructure, BC Hydro must plan well into the future. The IRP recommends actions for BC Hydro to undertake in the next 10 years to ensure that customers will continue to receive cost-effective, reliable, clean electricity over the long term.

As you will see in the draft plan, conservation continues to be the first and preferred way to close the gap between forecast need and supply — helping keep rates low and protecting the environment. However, future growth in electricity demand cannot be met through conservation alone. While growth in customers' electricity demands can be cut by more than half through conservation, our province will need additional electricity. In the draft plan, we recommend buying and building a combination of the most cost-competitive and reliable clean generation resources to address our customers' growing energy needs and to ensure sufficient capacity within the system to meet periods of peak demand. While ensuring electricity will be there in the future when it's needed, we are also mindful of the need to advance actions in a prudent manner to avoid unnecessary risks and keep rates as low as possible.

While B.C. has a wealth of potential renewable energy resources, future *capacity* resources are more limited. Meeting future growth in peak capacity requirements is becoming more challenging as we tap into the last remaining capacity projects within our reservoirs on the Peace and Columbia River systems. Looking to the future, BC Hydro will need to examine other resources like pumped hydro storage facilities and natural-gas fired generation for meeting periods of peak demand.

In developing this draft IRP, we have considered input from First Nations, the public and stakeholders that was gathered through consultation in March and April 2011. Now, BC Hydro is seeking feedback on the draft plan, with consultation taking place this June and July. To participate, please go to www.bchydro.com/irp.



ABOUT BC HYDRO

BC Hydro was created 50 years ago to harness B.C.'s renewable power on the Columbia and Peace River systems and to bring affordable electricity rates to communities across British Columbia. Today, BC Hydro is one of Canada's largest electric utilities, serving 95 per cent of B.C.'s population — safely, reliably and at rates that are competitive with other jurisdictions in North America.

More than 93 per cent of BC Hydro's current electricity supply comes from renewable sources that create little or no greenhouse gas emissions. BC Hydro operates 31 hydroelectric generation stations and three natural gas-fired generating stations. More than 70 independent power producers also connect to the grid, contributing approximately 20 per cent of the power required by customers. BC Hydro's integrated transmission system also connects to Alberta and Washington state, enabling BC Hydro to import electricity when necessary or to trade for the benefit of B.C. ratepayers.



HYDROELECTRIC

- | | | |
|------------------|--------------------|--------------------|
| 1. Aberfeldie | 12. Kootenay Canal | 23. Shuswap |
| 2. Alouette | 13. Ladore | 24. Spillimacheen |
| 3. Ash River | 14. La Joie | 25. Stave Falls |
| 4. Bridge River | 15. Mica | 26. Strathcona |
| 5. Buntzen | 16. Peace Canyon | 27. Wahleach |
| 6. Cheakamus | 17. Puntledge | 28. Walter Hardman |
| 7. Clowhom | 18. Revelstoke | 29. Whatshan |
| 8. Elko | 19. Ruskin | 30. Waneta |
| 9. Falls River | 20. Seton | 31. Clayton Falls |
| 10. John Hart | 21. Seven Mile | |
| 11. Jordan River | 22. G.M. Shrum | |

CONVENTIONAL NATURAL GAS

- | | | |
|------------|----------------|------------------|
| A. Burrard | B. Fort Nelson | C. Prince Rupert |
|------------|----------------|------------------|

PROVINCIAL GOALS

BC Hydro's mandate is to provide British Columbians with reliable and affordable electricity. As a Crown-owned utility, it is governed by the *Hydro and Power Authority Act* and regulated by the B.C. Utilities Commission under the *Utilities Commission Act*.

The provincial *Clean Energy Act* requires BC Hydro to submit an Integrated Resource Plan to the Minister of Energy by December 2012 and at least every five years thereafter. The Act also requires BC Hydro to be self-sufficient* by 2016 and to describe how it will respond to objectives in the Act, including:

- Generate and deliver at least 93 per cent of all electricity in British Columbia through clean or renewable sources.
- Keep rates among the most competitive in North America.
- Meet at least 66 per cent of any increase in demand through conservation and efficiency by 2020.
- Use renewable power to help achieve provincial greenhouse gas reduction targets.
- Encourage economic development and the creation and retention of jobs.
- Explore and, subject to Cabinet approval, pursue the opportunity to develop and sell clean electricity into the interprovincial and international markets.
- Foster the development of First Nations and rural communities through the use and development of clean or renewable resources.

* In February 2012, the B.C. government amended the definition of self-sufficiency so that BC Hydro must be self-sufficient during average water conditions. The previous definition had required self-sufficiency during historically low inflows, or critical water conditions.

CONSULTATION INPUT

During March and April 2011, BC Hydro sought input from First Nations, stakeholders and the public as it developed the information and conducted the analysis necessary to prepare the draft Integrated Resource Plan. During consultation, more than 700 stakeholders and members of the public attended stakeholder meetings and open houses. Participants completed 400 feedback forms and made 51 written submissions. At the same time, BC Hydro held nine First Nations regional workshops, attended by 121 participants representing 78 First Nations, tribal councils and Aboriginal organizations. BC Hydro also sought input from the IRP Technical Advisory Committee on its analysis.

For more information on the IRP consultation program and for reports summarizing the input received to date, go to bchydro.com/irp.

KEY PLANNING QUESTIONS

In developing its draft Integrated Resource Plan, BC Hydro addressed three questions:

1. How much electricity will British Columbians need over the next 20 years?

Demand must be understood in two ways: how much *annual energy* is required in total over the course of a whole year, and how much energy might be needed to meet demand peaks — to ensure that BC Hydro has sufficient *peak capacity* to keep the lights on, even on the coldest, darkest days.

2. What is the gap between existing supply and forecast demand?

What is the expected future output of BC Hydro's existing electricity generation, contracted energy supply and

transmission assets, and to what degree might existing conservation and efficiency measures reduce future demand? After conservation is accounted for, what is the gap between existing supply and anticipated demand?

3. How can the gap be closed?

What blend of additional conservation measures and additional generation and transmission resources will be needed to meet demand, reliably and cost-effectively?

BC Hydro's Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements.

20-YEAR LOAD FORECAST: ENERGY

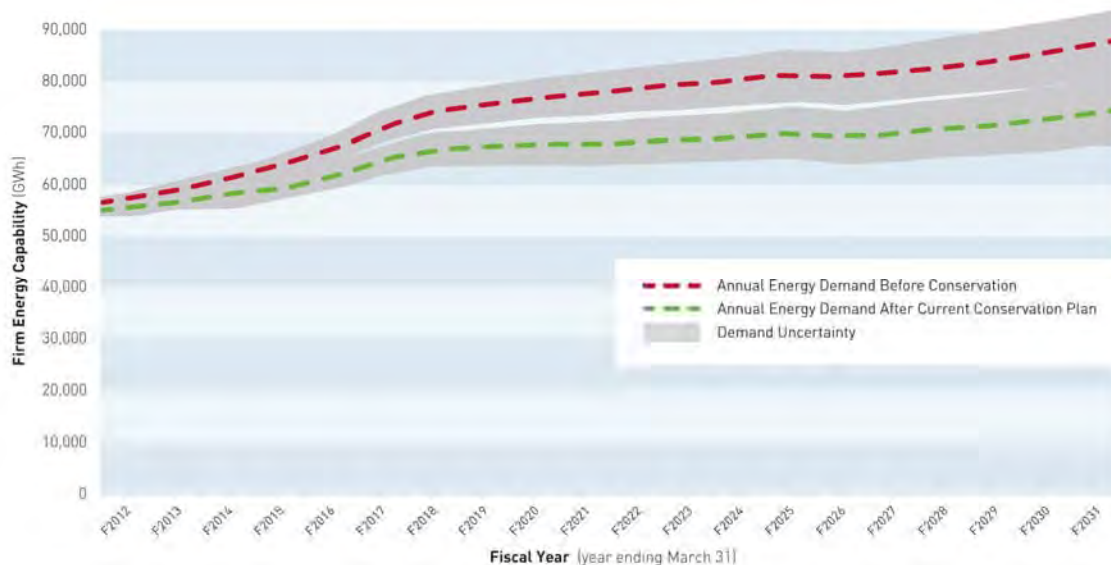
The December 2011 long-term load forecast shows that demand for energy could grow by approximately 50 per cent over the next 20 years before accounting for the savings that can be achieved by current conservation and efficiency — or demand-side measures.

While growth in population and normal economic activity are relatively predictable drivers of electricity demand, growth in demand among large industrial customers is more challenging to forecast and is subject to the fluctuating global appetite for B.C.'s natural resources. In its December 2011 forecast, BC Hydro notes that growth in demand for electricity from the mining, oil and gas sectors will be particularly strong.

BC Hydro has included the development of two new liquefied natural gas facilities proposed for the north coast of the province in the load forecast.

To manage uncertainty, BC Hydro is including the expected load in its forecast, and is continuing to work with government and customers to manage scenarios that reflect potential additional demand. This ensures that BC Hydro will be able to respond positively, should demand increase more than expected, or should demand arrive more quickly, due to any individual large industrial projects.

Annual Energy Load Forecast



Source: BC Hydro Long-Term Load Forecast, December 2011

20-YEAR LOAD FORECAST: PEAK DEMAND

In addition to examining the total energy needed by its customers over the period of a year, BC Hydro must also ensure that it has sufficient **peak capacity** to reliably meet the instantaneous demands placed on the system.

BC Hydro's load forecast indicates peak demand will grow by 50 per cent over the next 20 years, before accounting for the savings that can be achieved by current conservation and efficiency — or demand-side measures.

Peak Demand Load Forecast



Source: BC Hydro Long-Term Load Forecast, December 2011

ELECTRIFICATION: SWITCHING FUELS TO ELECTRICITY

The *Clean Energy Act* includes, as an energy objective for B.C., “to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia.” Fuel switching to clean electricity could occur across the economy. The North Coast liquefied natural gas (LNG) industry and the Horn River Basin natural gas industry are examples of potential electrification — traditionally, industry burned fossil fuels to power their industrial processes. Beyond those examples, the transportation sector is the largest source of greenhouse gases (GHG) emissions in B.C., and replacing vehicles that use gasoline and diesel with electric vehicles could reduce greenhouse gases significantly.

Within the IRP, BC Hydro has examined the potential drivers of electrification, the potential impact of electrification on the electric system, and when electrification might occur. Analysis shows that future carbon prices (the regulated cost of emitting greenhouse gases) would have the strongest influence on the speed with which the transportation and industrial sectors will decide to switch fuels and electrify. In the next 10 years, the forecast demand for electric vehicles is predicted to be relatively small due to the availability of vehicles and their cost. In the long term, electric vehicle usage could climb to become a more significant component of overall electricity demand and a source of distributed energy storage.

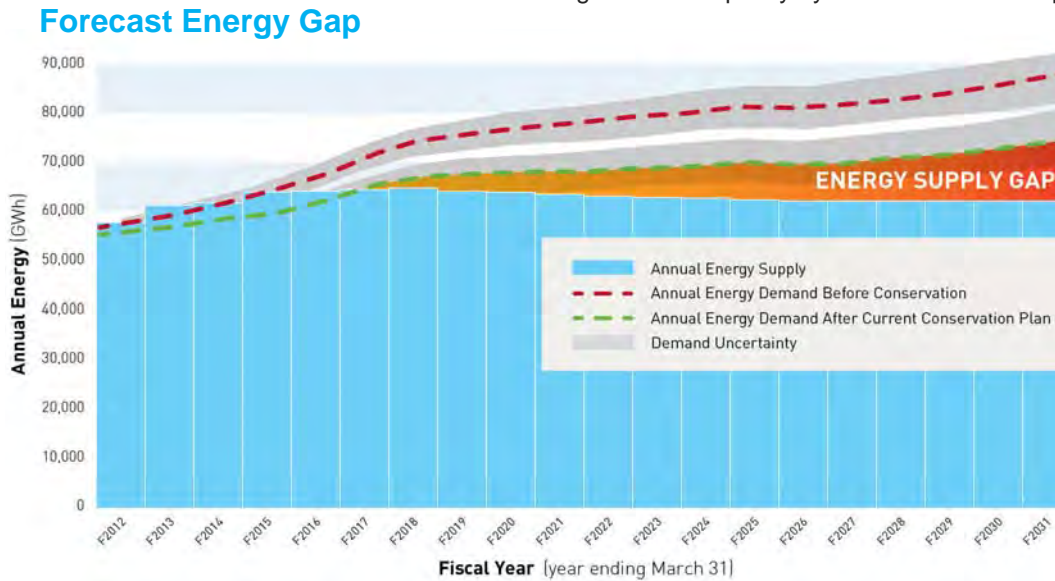
BC Hydro will continue to monitor forecast carbon prices, and analyze future potential demands on its system to put it in a ready-state to respond and assist in enabling fuel-switching, should the marketplace demand it.



THE LOAD RESOURCE BALANCE

A key step in long-term integrated resource planning involves comparing the electricity load forecast (demand) to currently available resources (supply). When forecast demand for electricity exceeds resources, a gap emerges that BC Hydro must consider how to fill.

BC Hydro’s energy supply-demand outlook, or load resource balance, indicates that customers will need 4,900 gigawatt hours of additional energy by fiscal 2021 and an additional 12,500 by fiscal 2031, assuming the first two LNG plants proceed as planned. They will also need an additional 2,400 megawatts of capacity by fiscal 2031 to meet peak demands.



KEY FINDINGS FROM ANALYSIS

In preparing the draft Integrated Resource Plan, BC Hydro updated its long-term electricity forecast and its potential resource options database. Here are key findings that inform the recommended actions in this draft plan.

- BC Hydro customers will need considerable new energy and capacity over the next 20 years. Specifically, in the next 10 years, they will need an additional 4,900 gigawatt hours of firm energy and 1,100 megawatts of peak capacity to meet probable needs.
- BC Hydro’s load profile is changing. New mining and oil and gas development in northern B.C. is creating new load centres in the province, potentially driving the need for additional energy and capacity in areas of the province where they didn’t exist before.
- Our province has an enviable quantity of future sources of clean and renewable energy. While analysis shows that hydro, wind and biomass will continue to be the more affordable options in the next 10 years, other qualified clean or renewable resources will be eligible in BC Hydro’s procurement processes.
- Future clean capacity resources are more limited than energy resources. Meeting future growth in peak demand will become more challenging as we tap into the last remaining additional capacity projects at our reservoirs on the Peace and Columbia river systems. Looking to the future, new sources of capacity such as pumped storage and natural gas will need to be explored for meeting peak periods of demand. While run-of-river and wind offer much energy, they cannot be relied upon when the wind isn’t blowing or water flows are inadequate.



RECOMMENDED ACTIONS TO CLOSE THE GAP

BC Hydro's Integrated Resource Plan focuses on the recommended actions BC Hydro must take over the next 10 years to add new resources to ensure that British Columbians receive low-cost, reliable electricity over the long term.

BC Hydro's overall strategy to meet growing demand for electricity is to conserve more first, then to build more and reinvest in our existing resources and buy more electricity from B.C.-based producers. In addition, as part of good utility practice, BC Hydro also recommends contingency plans to prepare for the event that demand is potentially greater than forecast. Following this approach, here are the recommended actions.



CONSERVE MORE

Conservation and efficiency, also referred to as demand-side measures, is BC Hydro's cleanest and least expensive way to close the gap between future electricity demand and existing resources. Conservation measures can include:

- Programs that provide information, education and incentives (for example, the Fridge Buy-Back Program).
- Specifically-designed electricity rates such as the existing residential inclining block rate that sends price signals to conserve but remains revenue neutral for BC Hydro.
- Government codes and standards that set minimum energy performance levels for products or systems that use, control or affect the use of energy — for example, by eliminating the sale of low-efficiency light bulbs.

BC Hydro's current demand-side management plan, established in 2008, targets a reduction in new load growth of 8,800 gigawatt hours per year by 2020. In analyzing how much conservation and efficiency to plan on going forward, BC Hydro compared its current approach, which emphasizes a complementary mix of programs, rates and government codes and standards, against a more aggressive approach that places increased reliance on more government-regulated codes and standards as well as other conservation measures. While such an approach has considerable upside, it would require further government action and consumer acceptance. Therefore, BC Hydro recommends increasing its current target and undertaking work to increase confidence and reduce risks associate with additional measures.

> Recommended Action: Increase the energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

> Recommended Action: Explore more codes, standards and conservation options for savings beyond the annual target of 9,800 gigawatt target.

Beyond measures aimed at reducing annual energy consumption, BC Hydro also recommends it undertake other measures to reduce peak demand, thereby reducing the capacity requirements placed on the system.

> Recommended Action: Pursue voluntary conservation programs that encourage industrial, commercial and residential customers to reduce electricity consumption during peak periods.



BUILD AND REINVEST MORE

While conservation is our first and preferred strategy to meet customers' future electricity requirements, made-in-B.C. power is still required to close the remaining gap between existing supply and future demand.

Site C Clean Energy Project

Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. With an earliest in-service date of fiscal 2021, Site C provides the most cost-effective clean energy under a range of potential load and market price scenarios. In addition to energy, Site C provides much-needed peak capacity, thereby facilitating the development and integration of intermittent renewable projects from sources such as wind and run-of-river hydro.

> Recommended Action: Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown's duty to consult and, where appropriate, accommodate Aboriginal groups.



Resource Smart for Additional Capacity

BC Hydro initiated the Resource Smart program in 1988 to identify and implement efficiency gains at existing BC Hydro facilities. The program provides additional annual energy and peak capacity by modifying, updating and retrofitting our existing generation facilities.

> Recommended Action: Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding another 500 megawatts of peak capacity to the BC Hydro system.

And beyond installing the sixth and last generating unit at Revelstoke Generating Station, BC Hydro recommends:

> Recommended Action: Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.



SITE C PUBLIC, STAKEHOLDER AND ABORIGINAL CONSULTATION

Site C is currently in the environmental and regulatory review stage, which includes a co-operative federal and provincial environmental assessment process, including a joint review panel. The environmental assessment process for Site C will include multiple opportunities for timely and meaningful participation by the public, Aboriginal groups, governments and other interested stakeholders.

Separate from consultation opportunities led by the regulatory agencies as part of the environmental assessment, BC Hydro is leading several streams of public and stakeholder consultation. In addition, BC Hydro and Aboriginal groups are engaged in a thorough consultation process that will continue through all stages of the project.

The streams of BC Hydro-led consultation are:

- Regional and Local Government Liaison
- Property Owner Liaison
- Local Area Consultation
- Project Definition Consultation
- Aboriginal Groups

For more information about Site C, the work of the joint review panel and the opportunities for consultation and input, visit bchydro.com/sitec.

BUILD AND REINVEST MORE

Combine Readily Available Resources to Meet the Short-Term Capacity Gap

BC Hydro's load resource balance shows a short-term gap in peak capacity until Revelstoke Unit 6 can be brought online in fiscal 2019 and Site C in fiscal 2021. The only other capacity resources that could be available in this time frame would be new natural gas generation plants, so to fill this short-term gap, BC Hydro proposes to rely on cost-effective and readily available resources to meet customers' growing requirements. The recommended action is:

> Recommended Action: Fill the short-term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

Purchasing peak capacity on the market and using the Canadian Entitlement under the Columbia River Treaty involves calling upon electricity from the United States during periods when customers' demand peaks. Because of transmission line constraints on its interties to the United States, BC Hydro expects it can count on no more than 500 megawatts of additional peak capacity from those sources.

The Canadian Entitlement is a result of the Columbia River Treaty between Canada and the United States in which the Canadian dams on the Columbia River are operated in a way that optimizes hydroelectric power generating potential in both countries. Within this treaty, Canada receives one-half of the extra power produced in the U.S. as a result of the Treaty projects — this is called the Canadian Entitlement. The Canadian Entitlement varies from year to year, but is generally in the range of 4,600 gigawatt hours per year and about 1,300 megawatts of capacity.

Burrard Thermal Generating Station is the only major generating facility located in the Lower Mainland, and is a valuable backup resource. The plant is available to meet demand in the Lower Mainland in the event that peak demand exceeds available resources or on an emergency basis. BC Hydro has, on average, called upon Burrard 12 days per year during the past three years to meet peak demand and to provide emergency backup for generation and transmission outages.



Transmission Requirements

B.C.'s bulk high-voltage transmission system is the backbone of electricity delivery to customers across the province. It carries high-voltage electricity long distances from where it is generated to the cities, towns and industrial centres where it is consumed.

To meet forecast load growth, BC Hydro has concluded that no high-voltage inter-regional transmission lines are required in the next 20 years. However, the existing 500 kilovolt (kV) line from Prince George to Terrace will need to be reinforced to meet new demand on the north coast. In addition, BC Hydro must:

- Complete committed transmission line projects such as the Interior-to Lower-Mainland (ILM) and Northwest Transmission Line (NTL) projects.
- Address region-specific transmission needs. For example, oil and gas expansion is driving rapid growth in the South Peace area.

> Recommended Action: Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.



BUY MORE

After targeting more demand-side measures and advancing Site C, additional energy is still needed in the 2017 to 2022 time frame. Clean energy producers can bring new clean power projects online in five to six years and in smaller increments that better match B.C.'s growing electricity demand curve.

> Recommended Action: Develop energy procurement options to acquire up to 2,000 gigawatt hours from clean energy producers for projects that would come into service in the 2016 — 2018 time period.

While design work can proceed at a minimal cost, final decisions on the timing and the volume of energy will be made once there is more certainty regarding projected electricity load.

Based on BC Hydro's assessment of potential generation resources in the province, it expects the majority of this power will come from wind, run-of-river hydro and biomass projects because these resources currently appear to be lower cost than other alternatives. However, power producers will have the opportunity to advance other forms of renewable power, such as geothermal, wave and tidal, in future procurement processes.

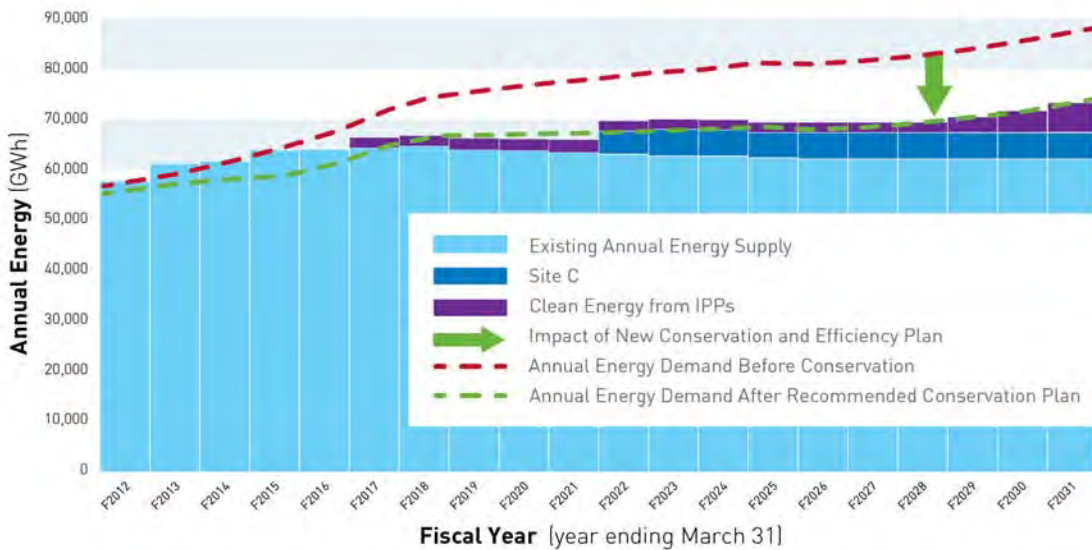


RESULT OF CONSERVE, BUILD AND BUY MORE ACTIONS

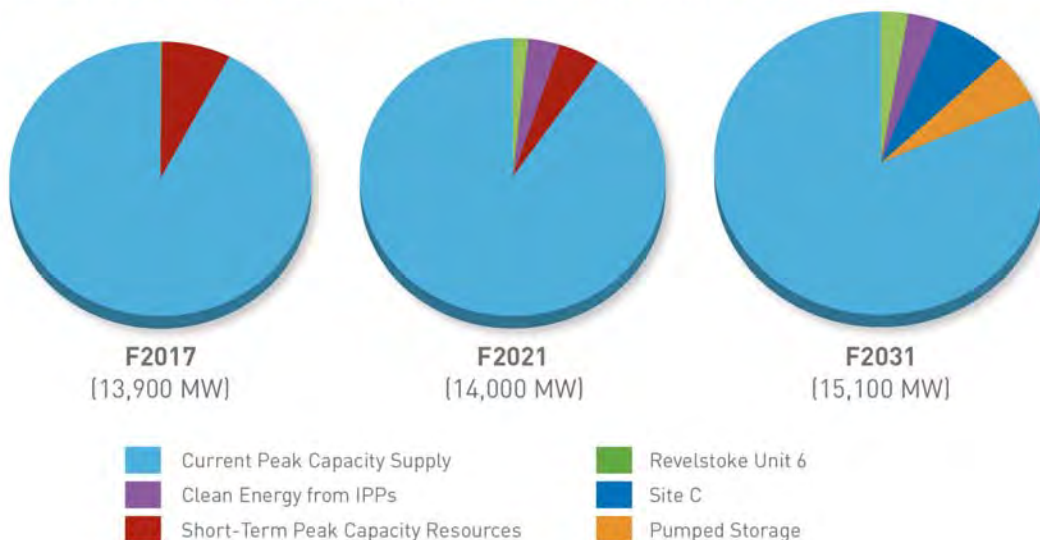
The recommended actions discussed so far address the forecast annual energy gap and peak capacity gap. From a cost perspective, the recommended actions (or portfolio of resources) are the most cost-effective ones available that can reliably close the gap and meet provincial energy objectives, thereby helping keep rates low over the long term. From an environmental and economic development perspective, the province’s clean energy, conservation, self-sufficiency and greenhouse gas reduction policies have guided BC Hydro’s direction in this plan, minimizing environmental impacts and supporting economic development.

As BC Hydro works toward fulfilling future electricity requirements, it will continue to monitor emerging new loads closely and be ready to adjust course as needed. In particular, forecast new demand from the liquefied natural gas industry requires close attention, as new LNG demand will arrive in substantial segments, versus growing slowly and incrementally over time.

Recommended actions to fill the projected annual energy gap.



Recommended actions to fill the projected peak capacity gap (after accounting for savings from conservation and efficiency plan).



PREPARE FOR POTENTIALLY GREATER DEMAND

As part of good utility practice, BC Hydro has contingency plans in case electricity demand grows faster than forecast, or planned resources don't come online when expected. The focus here is keeping options open at minimal cost until the future course of events is better understood.

BC Hydro is paying particular attention to major developments in the north where there is potential for even greater load growth from development in the large industrial sector.

North Coast: Liquefied Natural Gas Development and Mining

In addition to the two liquefied natural gas (LNG) facilities included in BC Hydro's base load forecast, BC Hydro is aware of a number of other LNG and mining projects currently being considered on the north coast. If a third LNG facility is approved and requests electrical service, BC Hydro would need to acquire significant additional energy and provide additional peak capacity to serve the additional load. BC Hydro is studying a range of options to serve this potential future need on the north coast, involving both electricity supply and associated transmission infrastructure.

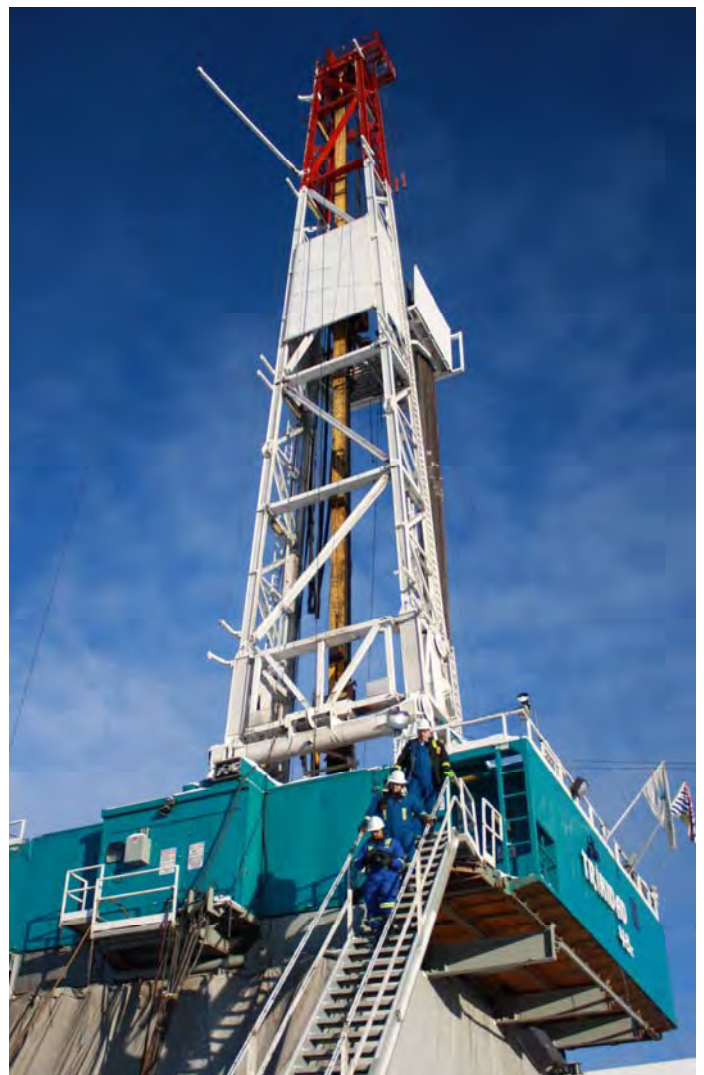
> Recommended Action: Continue to work with LNG developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically:

- Undertake work to maintain the earliest in-service date for a new 500 kV transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.
- Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019 — 2020 time frame, should it be needed.

Northeast: Natural Gas Extraction

BC Hydro is looking at the potential that large new natural gas extraction emerges in the Horn River Basin in northeast B.C. and, in turn, the gas industry seeks electrical power from BC Hydro. The Horn River Basin encompasses a large geographic area northeast of Fort Nelson that is currently not connected to the integrated transmission system. Traditionally, the natural gas industry has met its own energy requirements via burning natural gas or diesel. However, the industry could be electrified — thereby reducing related greenhouse gas emissions and helping to achieve climate change goals.

>Recommended Action: Continue to monitor the northeast gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.



PREPARE FOR POTENTIALLY GREATER DEMAND

Additional Peak Capacity Resources for Contingency Purposes

For contingency planning purposes, BC Hydro must look beyond the base plan and address what if forecast peak capacity is greater than expected or other new resources don't come online when expected.

> Recommended Action: Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

> Recommended Action: Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

Pumped storage projects can be sited in areas that are close to load centres to minimize electricity losses and transmission lines. British Columbia, with its high mountains near the major load centre in the Lower Mainland, is well suited to pumped storage. However, pumped storage has not been built in B.C. before and the construction time for a large hydroelectric project is significant.

Meanwhile, BC Hydro recommends it also works with industry to explore natural gas as a resource option, as it is the next-lowest-cost alternative for adding additional capacity. Natural gas-fired plants can be located close to where the electricity is needed, reducing the need to build new transmission.

LIQUEFIED NATURAL GAS (LNG) DEVELOPMENT ON THE NORTH COAST

Several companies are currently working to establish LNG export facilities on the north coast, creating a potential investment of approximately \$20 billion in B.C. and the addition of many new jobs. Converting natural gas to a liquefied state is highly energy intensive, so BC Hydro is working with the provincial government and industry to better understand the potential demand from these LNG plants. The provincial government has said it is committed to seeing three LNG plants in operation by 2020. Related provincial goals include ensuring B.C. is competitive in the global LNG market, maintaining leadership on climate change and clean energy, and keeping energy rates affordable.

BC Hydro has sufficient supply to meet the energy needs of the first two of three LNG facilities expected to come into operation in the next five years. BC Hydro is working closely with potential proponents and studying supply options to meet possible additional demand that could emerge if a third LNG plant is established in the longer term or if other additional electricity demand emerges.

EXPORT MARKET CONCLUSIONS

As part of its Integrated Resource Plan, the *Clean Energy Act* directs BC Hydro to study the potential to acquire electricity for the purpose of export.

Through its wholly owned subsidiary Powerex, BC Hydro has a long and successful track record of trading electricity for the benefit of B.C. ratepayers. BC Hydro's reservoirs and the connectivity of its integrated transmission system to Alberta and the western United States have enabled BC Hydro to trade electricity in a way that optimizes its system and that finds a market for electricity that is surplus to domestic needs. Beyond this regular electricity trading, the government asked BC Hydro to examine the opportunity to acquire renewable energy solely for purposes of export, if there is a clear business case demonstrating the economic benefit to British Columbians.

BC Hydro's analysis shows that current market conditions are not conducive to selling clean electricity into export markets. Made-in-B.C. power faces some relative disadvantages, including longer distances to market and challenging terrain. Also, the U.S. tax credits for renewable energy, decreased interest in advancing greenhouse gas emissions regulations, and low natural gas prices create an unfavourable environment for made-in-B.C. power. However, over the long term, market conditions could change.





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First Nation Input into the Draft Integrated Resource Plan – March 2011

First Nations input into the draft Integrated Resource Plan has been received by BC Hydro verbally and in writing. First Nations input from each regional workshop is summarized separately. Additional written comments were provided to BC Hydro following the workshops which are set out in either a First Nation Input Form or by letter. In addition, the BCFNEMC has submitted two longer reports containing their comments, one arising from their involvement in the Technical Advisory Committee and the other from their involvement in the First Nations regional workshops.

Input on Conservation and Efficiency

There was widespread support among First Nations participants for greater conservation and efficiency. However, a concern over the cost of conservation was a recurring theme. There was a concern that First Nations, many of who are economically disadvantaged and live in homes that are not energy efficient, would be burdened with higher electricity rates and unaffordable energy efficiency upgrades. There was also a perception among some participants that business and industry are not doing their part to conserve and a perceived conflict between economic growth and conservation. Many participants expressed concern about the environmental impact of certain conservation and efficiency measures, such as the potential impact of disposing of hazardous waste (e.g. batteries and LED bulbs).

Recommendations included more funding for energy efficient upgrades and financial incentives for conservation and efficiency through programs such as net metering. There was also significant interest in education and engagement with First Nations communities, especially with First Nations youth, to build capacity to participate in greater conservation and efficiency. The BCFNEMC recommended that there be funding for First Nation Community Energy Managers to support energy conservation in First Nation communities.

Input on Electricity Generation Options

In the first round of regional workshops, BC Hydro presented three example portfolios to participants. The purpose of the example portfolios was to illustrate, in a non technical fashion, the key trade-offs that arise between broad electricity generation options and to seek First Nations' input in order to understand their general perspectives on these types of portfolios. The level of discussion on portfolios and specific resource options varied between workshops. At some sessions First Nations participants provided comments on the specific examples portfolios, but in most cases the input received was directed to the topic of electricity generation options in general. None of the example portfolios received significant support from First Nations and there were many requests for more information on portfolios before expressing a preference. Many participants were reluctant to provide input on preferences relating to portfolios without more information on how the Integrated Resource Plan might affect their communities. There was interest in taking a First Nations territory view of planning rather than a province-wide view and more involvement in the planning process.

There was a significant concern about increasing electricity rates and the cumulative environmental impacts of generation development. On the other hand there was significant interest in economic development opportunities for First Nations in relation to energy development, and the associated jobs and revenue.

The BCFNEMC commented that First Nations strongly support clean or renewable energy development in part because of climate change. However, the BCFNEMC states that the cost of future development projects must be taken into account in long-term planning and that a focus on conservation and sustainability can help ensure increasing electricity prices do not become a burden on local residents, or become a barrier to other types of economic development.



There was an interest in seeing more resource options included in the portfolios, including solar, geothermal, biomass, wave and tidal. There was a general preference for developing clean or renewable resources with the exception of Site C. Many participants did not consider Site C “clean”. The recurring themes from the input on Site C were either opposition, or that the consent of the impacted First Nations is required for the project to proceed. There was significant interest in community based energy projects.

Input on Electrification

The input of First Nation participants regarding electrification varied. There was both support and opposition to taking a proactive approach to electrification while others commented that there was a “disconnect” between the benefits of electrification and the concerns of First Nations communities many of which are poor, in rural areas and not connected to the electricity grid. There was a perception among many participants that electrification will benefit urban areas at the expense of rural First Nation communities. The BCFNEMC recommends that extending BC Hydro grid service to remote communities should be a priority of electrification.

Opposition to electrification was primarily due to a concern that electrification may lead to higher electricity rates and greater environmental impact on the land through more generation and transmission projects. While supportive of actions that reduce GHG emissions, the BCFNEMC states that the potential benefits of GHG emission reductions need to be weighed against the environmental impacts of electricity generation and transmission projects.

Input on Transmission Planning

With some exceptions, there was a general preference for a proactive approach to transmission planning provided that it is done with the early involvement and accommodation of the affected First Nations. Although the topic of transmission planning involves potential future transmission infrastructure many participants were focused on compensation for the historical impacts of existing transmission infrastructure on asserted First Nations rights and title.

Many participants indicated that transmission benefits urban communities at the expense of rural First Nation communities. It was recommended that economic development opportunities for First Nations be a consideration in transmission planning. The BCFNEMC recommends that isolated communities currently served by diesel generation should be a priority for new transmission access.

There was a concern about the cumulative environmental impacts of transmission infrastructure. Recommendations included, maximizing the use of existing transmission lines and corridors and plan where not to build transmission lines.

Input on Export Market Potential

There were many participants who expressed support for electricity exports provided that First Nations share in the benefits. There were several benefits identified, including revenue sharing, ownership interest in the export projects, and reduced electricity rates. The BCFNEMC stated that the concept that economic benefits would flow primarily to the provincial government is unacceptable.

Some participants in the workshops expressed opposition to acquiring renewable energy from independent power producers for the purpose of export. Among other things, there was a concern that export of electricity will put a greater strain on the environment and because of the economic risks involved (notwithstanding the Clean Energy Act protects ratepayers from the risk of loss due to export).

The BCFNEMC notes that BC Hydro will have a substantial amount of clean and renewable electricity available for export in most years and states that it is difficult to understand how a case could be made that acquiring additional electricity resources to serve the export market could result in economic benefits to British Columbia.



Whether exporting electricity or not, several participants indicated that domestic need for electricity should not be subordinated to the electricity needs in other jurisdictions.

Input on Clean or Renewable Energy Development

There was significant interest in creating revenue and jobs for First Nations communities through participation in clean or renewable energy development. There was also significant interest in connecting remote communities to the electricity grid or alternatively having remote communities become energy self sufficient through clean or renewable generation projects that replace diesel generation. Apart from clean or renewable energy developments, participants were also interested in employment and business opportunities with BC Hydro.

There was a substantial amount of input on BC Hydro’s power acquisitions processes. The input was directed at ensuring First Nations would benefit from clean or renewable energy projects and that their asserted rights and title would be respected and accommodated. There was frustration with BC Hydro’s previous power acquisitions processes because of, among other things, the lack of success of some First Nations proponents and the cost and complexity of the process for First Nations proponents. In addition, there is a concern that First Nations will spend limited resource participating in consultation with proponents in a power call process without any assurance of a corresponding benefit because many proponents seeking to consult with First Nations may not be awarded an Energy Purchase Agreement.

Recommendations included capacity building and incentives for First Nations so they could effectively participate in clean or renewable energy development. Changes to BC Hydro’s power acquisitions processes to support First Nations projects, such as a First Nations only power call. There was also a recommendation to undertake a feasibility study (involving key First Nations participants) on how First Nations can participate in clean or renewable energy development.

Input on Consultation Process

At several of the regional workshops participants expressed significant concern about the First Nations consultation process for the Integrated Resource Plan. Almost every participant who provided input on this issue did not consider the process “consultation”.

There was a concern about the legal implications of the word consultation and the implications to First Nations resulting from their participation in the process. This issue was compounded by the fact that the future implications of the Integrated Resource Plan on individual First Nations communities was unclear to participants and there was a concern that it may be used to justify later decisions that First Nations might oppose.

There was a wide range of views regarding what was required for consultation to occur. These included the following:

- Revenue sharing;
- Compensation for past grievances;
- Partnership between First Nations and BC Hydro in the decision-making process for the Integrated Resource Plan and earlier involvement from First Nations than presently the case;
- An understanding of the impacts of the Integrated Resource Plan from a First Nations territory perspective;
- Sufficient capacity funding available to individual First Nations so they understand the technical aspects of the Integrated Resource Plan, in particular the portfolios being developed by BC Hydro’s energy planners;
- Involvement of senior leaders from BC Hydro and government in the process;
- Meetings with BC Hydro in individual First Nation communities.

Appendix 6 — Workshop Registrant & Participant Lists

Integrated Resource Plan Appendix 7G

2011 First Nations Workshop Registrants & Participants Registered: **143** Attended: **121**

Date	Location	Registered	Attended
02-Mar-2011	Nanaimo		
02-Mar-2011	Nanaimo	16 Registered	Attended: 11
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	K'omoks First Nation	Jennifer Knox	<input checked="" type="checkbox"/>
	K'omoks First Nation	Jenny Milar	<input type="checkbox"/>
	Lake Cowichan First Nation	Chief Cyril Livingstone	<input type="checkbox"/>
	Lake Cowichan First Nation	Geneva Livingstone	<input type="checkbox"/>
	Lyackson First Nation	Kathleen Johnnie	<input checked="" type="checkbox"/>
	Pauquachin First Nation	Herman Henry	<input checked="" type="checkbox"/>
	Penelakut Tribe	Denise James	<input checked="" type="checkbox"/>
	Toquaht Nation	Kevin Mack	<input checked="" type="checkbox"/>
	Toquaht Nation	Rick Shafer	<input type="checkbox"/>
	Tsawout First Nation	Adeline Claxton	<input checked="" type="checkbox"/>
	Tsawout First Nation	Eric Pelkey	<input checked="" type="checkbox"/>
	Tsawout First Nation	Lou Claxton	<input checked="" type="checkbox"/>
	Tsessaht First Nation	Lisa Gallic	<input checked="" type="checkbox"/>
	Uchucklesaht Tribe	Chief Carlie Cootes	<input type="checkbox"/>
	Yuułuʔiłʔatḥ Government Office	Trevor Jones	<input checked="" type="checkbox"/>
03-Mar-2011	Campbell River	7 Registered	Attended: 6
	Campbell River Indian Band	Jason Price	<input checked="" type="checkbox"/>
	Cowichan Tribes	Fred Bosma	<input checked="" type="checkbox"/>
	Cowichan Tribes	Jenn George	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	KWAKIUTL DISTRICT COUNCIL	Ken Barth	<input checked="" type="checkbox"/>
	Mowachaht/Muchalaht First Nation	Wayne Lord	<input type="checkbox"/>
	Quatsino First Nation	David Schmidt	<input checked="" type="checkbox"/>
04-Mar-2011	Abbotsford	19 Registered	Attended: 17
	Cheam First Nation	Chief Lincoln Douglas	<input checked="" type="checkbox"/>
	Cheam First Nation	Eric Alex	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	FIRST NATIONS SUMMIT	Stacey Fox	<input checked="" type="checkbox"/>
	Katzie First Nation	Debbie Miller	<input checked="" type="checkbox"/>
	Leq a: mel First Nation	Debbie Kelly	<input checked="" type="checkbox"/>
	Leq a: mel First Nation	Mike Kelly	<input checked="" type="checkbox"/>
	Matsqui First Nation	Cindy Collins	<input checked="" type="checkbox"/>
	Matsqui First Nation	Stan Morgan	<input type="checkbox"/>
	Samahquam	Pauline J. Peters	<input checked="" type="checkbox"/>
	Samahquam	William Schneider	<input checked="" type="checkbox"/>
	Skatin Nations	Chief Patrick Williams	<input type="checkbox"/>
	Skatin Nations	Gabe Williams	<input checked="" type="checkbox"/>
	Skawahlook First Nation	Debra Schneider	<input checked="" type="checkbox"/>
	Soowahile Indian Band	Larry Commodore	<input checked="" type="checkbox"/>
	STO:LO TRIBAL COUNCIL	CarrieLynn Victor	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

04-Mar-2011	Abbotsford		
04-Mar-2011	Abbotsford	19 Registered	Attended: 17
	STO:LO TRIBAL COUNCIL	Frank Andrew	<input checked="" type="checkbox"/>
	Tsawwassen First Nation	Colin Ward	<input checked="" type="checkbox"/>
	Tsawwassen First Nation	Tina Dion	<input checked="" type="checkbox"/>
07-Mar-2011	Kamloops	17 Registered	Attended: 14
	Adams Lake Indian Band	David Nordquist	<input checked="" type="checkbox"/>
	Xwisten (Bridge River Indian Band)	Chief Bradley Jack	<input checked="" type="checkbox"/>
	Canim Lake Band	Jessie Archie	<input checked="" type="checkbox"/>
	Canim Lake Band	Pamela Theodore	<input checked="" type="checkbox"/>
	Stswecem'c/Xgat'tem (Canoe Creek Band)	Chief Hank Adam	<input checked="" type="checkbox"/>
	Stswecem'c/Xgat'tem (Canoe Creek Band)	Harold Harry	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	Kanaka Bar Indian Band	Chief James Frank	<input checked="" type="checkbox"/>
	Little Shuswap Lake Indian Band	Andreas Artz	<input type="checkbox"/>
	Neskonlith Band	Richard Manuel	<input type="checkbox"/>
	Neskonlith Band	Sarina Wood	<input type="checkbox"/>
	Nooaitch Indian Band	Douglas Shackley	<input checked="" type="checkbox"/>
	Nooaitch Indian Band	Hector Fountain	<input checked="" type="checkbox"/>
	Splats'in First Nation	Sunny LeBourdais	<input checked="" type="checkbox"/>
	St'át'imc Nation/Hydro Office	Jim MacArthur	<input checked="" type="checkbox"/>
	T'it'q'et	Chief Shelley Leech	<input checked="" type="checkbox"/>
	Xaxli'p	Howard Bob	<input checked="" type="checkbox"/>
11-Mar-2011	Vancouver	24 Registered	Attended: 22
	Bonaparte Indian Band	Nina Minnabarriet	<input checked="" type="checkbox"/>
	Chawathil	Jolene Charlie	<input checked="" type="checkbox"/>
	Xa'xtsa (Douglas) First Nation	Don Harris	<input checked="" type="checkbox"/>
	Xa'xtsa (Douglas) First Nation	Lyle Leo	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Claire Marshall	<input checked="" type="checkbox"/>
	Halalt First Nation	Jack Smith	<input type="checkbox"/>
	Heiltsuk Nation	Laurie Whitehead	<input checked="" type="checkbox"/>
	Hupacasath First Nation	Chief Shaunee Casavant	<input type="checkbox"/>
	IN-SHUCK-CH TRIBAL COUNCIL	Josh Alexander	<input checked="" type="checkbox"/>
	IN-SHUCK-CH TRIBAL COUNCIL	Stephen Jimmie	<input checked="" type="checkbox"/>
	Lower Nicola Indian Band	John Keating	<input checked="" type="checkbox"/>
	N'Quatqua First Nations	Chief A. Ralph Thevarge	<input checked="" type="checkbox"/>
	N'Quatqua First Nations	Karen Thevarge	<input checked="" type="checkbox"/>
	Old Massett Village Council	Cecil Brown	<input checked="" type="checkbox"/>
	Old Massett Village Council	Judy Williams	<input checked="" type="checkbox"/>
	Skii km Lax Ha	Chief Darlene Simpson	<input checked="" type="checkbox"/>
	Skii km Lax Ha	George Simpson	<input checked="" type="checkbox"/>
	Sliammon First Nation	Clint Williams	<input checked="" type="checkbox"/>
	St. Mary's Band	Becky Pelkonen	<input checked="" type="checkbox"/>
	St. Mary's Band	Chief Cheryl Casimer	<input checked="" type="checkbox"/>
	STO:LO NATION	Jessica Morrison	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

11-Mar-2011	Vancouver		
11-Mar-2011	Vancouver	24 Registered	Attended: 22
	STO:LO NATION	Sonny McHalsie	<input checked="" type="checkbox"/>
	Sts'ailes (Chehalis)	Morgan Ritchie	<input checked="" type="checkbox"/>
	Tl'etinqox-t'in Government Office	Blaine Grinder	<input checked="" type="checkbox"/>
14-Mar-2011	Terrace	18 Registered	Attended: 16
	Dease River First Nation	Agneslyn Dennis	<input checked="" type="checkbox"/>
	Dease River First Nation	Audrey Chief	<input checked="" type="checkbox"/>
	Dease River First Nation	Chief Carol Ann Johnny	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Joanna Prince	<input checked="" type="checkbox"/>
	Gitanmaxx Band	Pauline Rubinato	<input checked="" type="checkbox"/>
	Gitanmaxx Band	Richard Wright	<input checked="" type="checkbox"/>
	Gitxaala Nation	Mark Iqnas	<input type="checkbox"/>
	Gitga'at Nation (Hartley Bay)	David Benton	<input checked="" type="checkbox"/>
	Kitselas First Nation	Wilfred McKenzie	<input type="checkbox"/>
	Kitsumkalum	Chief Don Roberts	<input checked="" type="checkbox"/>
	Kitsumkalum	Gary Alexcee	<input checked="" type="checkbox"/>
	Kitsumkalum	Terry Bennett	<input checked="" type="checkbox"/>
	Lax Kw'Alaams Band	Jerry Lawson	<input checked="" type="checkbox"/>
	Metlakatla	Cory Stephens	<input checked="" type="checkbox"/>
	Nisga'a Village of Gingolx	Nelson Clayton	<input checked="" type="checkbox"/>
	Nisga'a Village of New Aiyansh	Earl Monroe	<input checked="" type="checkbox"/>
	Nisga'a Village of New Aiyansh	Sherry Bejcar	<input checked="" type="checkbox"/>
	Skidegate Band Council	Trent Moraes	<input checked="" type="checkbox"/>
16-Mar-2011	Fort St. John	5 Registered	Attended: 4
	Blueberry River First Nations	Debbie Apsassin	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	Saulteau First Nations	Fernie May Garbitt	<input type="checkbox"/>
	TREATY 8 TRIBAL ASSOCIATION	Jim Webb	<input checked="" type="checkbox"/>
	TREATY 8 TRIBAL ASSOCIATION	Rick Hendrik	<input checked="" type="checkbox"/>
17-Mar-2011	Prince George	33 Registered	Attended: 27
	CARRIER CHILCOTIN TRIBAL COUNCIL	Bert Groenberg	<input checked="" type="checkbox"/>
	Cheslatta Carrier Nation	James Rakochy	<input type="checkbox"/>
	Cheslatta Carrier Nation	Michael Charlie	<input type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Joanna Prince	<input checked="" type="checkbox"/>
	Gitsegukla Band	Graham Brown	<input checked="" type="checkbox"/>
	Gitsegukla Band	Vern Milton	<input checked="" type="checkbox"/>
	Gitxsan Treaty Society (Hereditary Chiefs)	Barb Huson	<input checked="" type="checkbox"/>
	Gitxsan Treaty Society (Hereditary Chiefs)	Cliff Sampare	<input checked="" type="checkbox"/>
	Kwadacha Nation	Darryl McCook	<input checked="" type="checkbox"/>
	Kwakiutl Indian Band	Lucille Brotchie	<input checked="" type="checkbox"/>
	Lake Babine Nation	Frank Michell	<input checked="" type="checkbox"/>
	Lake Babine Nation	John Bertacco	<input checked="" type="checkbox"/>
	Lake Babine Nation	Verna Power	<input checked="" type="checkbox"/>
	Lheidli T'enneh First Nation	Jackie Brown	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

17-Mar-2011	Prince George		
17-Mar-2011	Prince George	33 Registered	Attended: 27
	Lhtako Dene Nation (Red Bluff)	Chief Geronimo Squinas	<input checked="" type="checkbox"/>
	Lhtako Dene Nation (Red Bluff)	Craig Buchan	<input checked="" type="checkbox"/>
	Tsek'hene First Nation	Chief Derek Orr	<input checked="" type="checkbox"/>
	Tsek'hene First Nation	Fred Inyallie	<input type="checkbox"/>
	Nadleh Whut'en First Nation	Anne Ketlo	<input checked="" type="checkbox"/>
	Nadleh Whut'en First Nation	Larry Nooski	<input checked="" type="checkbox"/>
	Nak'azdli Band	Chief Fred Sam	<input checked="" type="checkbox"/>
	Nak'azdli Band	Leonard Thomas	<input type="checkbox"/>
	Nazko First Nation	Gerry Powell	<input checked="" type="checkbox"/>
	Saik'uz First Nation	Chief Jackie Thomas	<input checked="" type="checkbox"/>
	Saik'uz First Nation	Lesley Raphael	<input type="checkbox"/>
	Saulteau First Nations	Rick Publicover	<input type="checkbox"/>
	Tahltan Indian Band	Chief Rick McLean	<input checked="" type="checkbox"/>
	Takla Lake First Nation	Keith West	<input checked="" type="checkbox"/>
	Tsay Keh Dene	Johnny Pierre	<input checked="" type="checkbox"/>
	Office of the Wet'suwet'en	David de Wit	<input checked="" type="checkbox"/>
	Office of the Wet'suwet'en	John Ridsdale	<input checked="" type="checkbox"/>
	Xeni Gwet'in First Nations Government	Chris William	<input checked="" type="checkbox"/>
	Xeni Gwet'in First Nations Government	Marcus William	<input checked="" type="checkbox"/>
21-Mar-2011	Castlegar	4 Registered	Attended: 4
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	KTUNAXA NATION COUNCIL SOCIETY	Bob Luke	<input checked="" type="checkbox"/>
	KTUNAXA NATION COUNCIL SOCIETY	Marion Eunson	<input checked="" type="checkbox"/>
	KTUNAXA NATION COUNCIL SOCIETY	Norm Fraser	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

2012 First Nations Workshop Registrants & Participants		Registered: 145	Attended: 117
26-Jun-2012	Campbell River		
26-Jun-2012	Campbell River	17 Registered	Attended: 13
	We Wai Kai Nation (Cape Mudge)	Chief Ralph Dick	<input checked="" type="checkbox"/>
	We Wai Kai Nation (Cape Mudge)	Lise Steele	<input checked="" type="checkbox"/>
	Da'naxda'xw First Nation	Robin Dawson	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	Huu-ay-aht First Nations	Chief Jeff Cook	<input checked="" type="checkbox"/>
	Huu-ay-aht First Nations	John Jack	<input checked="" type="checkbox"/>
	Huu-ay-aht First Nations	Stan Coleman	<input checked="" type="checkbox"/>
	Klahoose First Nation	Hans Kok	<input type="checkbox"/>
	Klahoose First Nation	Mavis Kok	<input type="checkbox"/>
	K'omoks First Nation	Katherine Frank	<input checked="" type="checkbox"/>
	K'omoks First Nation	Krissy Brown	<input checked="" type="checkbox"/>
	Kwakiutl Indian Band	Coreen Child	<input type="checkbox"/>
	KWAKIUTL DISTRICT COUNCIL	Ken Barth	<input checked="" type="checkbox"/>
	Mowachaht/Muchalaht First Nation	Wayne Lord	<input type="checkbox"/>
	Qualicum First Nation	Donna Kennedy	<input checked="" type="checkbox"/>
	Qualicum First Nation	Gordon Kennedy	<input checked="" type="checkbox"/>
	St. Mary's Band	Brian Watson	<input checked="" type="checkbox"/>
27-Jun-2012	Nanaimo	13 Registered	Attended: 8
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	Lake Cowichan First Nation	Aaron Hamilton	<input type="checkbox"/>
	Lake Cowichan First Nation	Chief Cyril Livingstone	<input type="checkbox"/>
	Lyackson First Nation	Chris Thompson	<input checked="" type="checkbox"/>
	Lyackson First Nation	Kathleen Johnnie	<input checked="" type="checkbox"/>
	Penelakut Tribe	Denise James	<input checked="" type="checkbox"/>
	Quatsino First Nation	Ralph Wallas	<input checked="" type="checkbox"/>
	Tsawout First Nation	Adelynne Claxton	<input checked="" type="checkbox"/>
	Tsawout First Nation	Lou Claxton	<input checked="" type="checkbox"/>
	Tseshahat First Nation	Cindy Stern	<input type="checkbox"/>
	Tseshahat First Nation	Lisa Gallic	<input checked="" type="checkbox"/>
	Yuuku?i?ath Government Office	Chief Charlie McCarthy	<input type="checkbox"/>
	Yuuku?i?ath Government Office	Darren Mead-Miller	<input type="checkbox"/>
05-Jul-2012	Fort St. John	3 Registered	Attended: 3
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>
	TREATY 8 TRIBAL ASSOCIATION	Jeff Richert	<input checked="" type="checkbox"/>
	West Moberly First Nations	Jim Webb	<input checked="" type="checkbox"/>
06-Jul-2012	Prince George	30 Registered	Attended: 27
	Burns Lake Band	Dan George	<input checked="" type="checkbox"/>
	Burns Lake Band	Wes Sam	<input checked="" type="checkbox"/>
	Cheslatta Carrier Nation	Chief Richard Peters	<input type="checkbox"/>
	Cheslatta Carrier Nation	Mike Robertson	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	John Lawson	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

06-Jul-2012	Prince George		
06-Jul-2012	Prince George	30 Registered	Attended: 27
	Gitsegukla Band	Art Sampare	<input checked="" type="checkbox"/>
	Gitsegukla Band	Clifford Sampare	<input checked="" type="checkbox"/>
	Gitxsan Treaty Society (Hereditary Chiefs)	Beverley Clifton Percival	<input checked="" type="checkbox"/>
	Gitxsan Treaty Society (Hereditary Chiefs)	Bonnie Mowatt	<input checked="" type="checkbox"/>
	Lake Babine Nation	Frank Alec	<input checked="" type="checkbox"/>
	Lake Babine Nation	Wilf Adam	<input type="checkbox"/>
	Lheidli T'enneh First Nation	Gord Haines	<input checked="" type="checkbox"/>
	Lheidli T'enneh First Nation	Jackie Brown	<input checked="" type="checkbox"/>
	Lheidli T'enneh First Nation	Shirley Wiltermuth	<input checked="" type="checkbox"/>
	Lhtako Dene Nation (Red Bluff)	Chief Clifford Lebrun	<input checked="" type="checkbox"/>
	Lhtako Dene Nation (Red Bluff)	Frank Boucher, Councillor	<input checked="" type="checkbox"/>
	Nadleh Whut'en First Nation	Beverly Ketlo	<input checked="" type="checkbox"/>
	Nadleh Whut'en First Nation	George George Sr	<input checked="" type="checkbox"/>
	Nak'azdli Band	Chief Fred Sam	<input checked="" type="checkbox"/>
	Nak'azdli Band	Leonard Thomas	<input checked="" type="checkbox"/>
	Nazko First Nation	Sherry Shaw	<input checked="" type="checkbox"/>
	Nazko First Nation	Terrence Paul	<input checked="" type="checkbox"/>
	Nee-Tahi-Buhn Indian Band	Laura Jack	<input checked="" type="checkbox"/>
	Nee-Tahi-Buhn Indian Band	Pius Jack	<input checked="" type="checkbox"/>
	Saik'uz First Nation	Alison Johnny	<input checked="" type="checkbox"/>
	St. Mary's Band	Chief Cheryl Casimer	<input type="checkbox"/>
	Takla Lake First Nation	Colin Teegee	<input checked="" type="checkbox"/>
	Takla Lake First Nation	Keith West	<input checked="" type="checkbox"/>
	Tl'azt'en Nation	Chief Ralph Pierre	<input checked="" type="checkbox"/>
	Tl'azt'en Nation	Simon John	<input checked="" type="checkbox"/>
09-Jul-2012	Kamloops	19 Registered	Attended: 15
	Ashcroft Indian Band	Darcy Robinson	<input type="checkbox"/>
	Ashcroft Indian Band	Jennifer Morrison	<input checked="" type="checkbox"/>
	Canim Lake Band	Jesse Archie	<input checked="" type="checkbox"/>
	Canim Lake Band	Pam Theodore	<input checked="" type="checkbox"/>
	Coldwater Indian Band	Annie Major	<input checked="" type="checkbox"/>
	Coldwater Indian Band	Lee Spahan	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Dave Porter	<input checked="" type="checkbox"/>
	Llenlley'nen (High Bar First Nation)	Chief Larry Fletcher	<input type="checkbox"/>
	Llenlley'nen (High Bar First Nation)	Larry Fletcher	<input checked="" type="checkbox"/>
	Llenlley'nen (High Bar First Nation)	Roy Fletcher	<input checked="" type="checkbox"/>
	Nooaitch Indian Band	Carl McLeod	<input type="checkbox"/>
	Nooaitch Indian Band	Larry Frank Thomas	<input checked="" type="checkbox"/>
	Nooaitch Indian Band	Sharon McLeod	<input checked="" type="checkbox"/>
	Skeetchestn Indian Band	Deb Biddiscombe	<input checked="" type="checkbox"/>
	Skeetchestn Indian Band	Lissa Nadeau	<input checked="" type="checkbox"/>
	Splats'in First Nation	Raymond Cormier	<input type="checkbox"/>
	Splats'in First Nation	Stuart Lee	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

09-Jul-2012	Kamloops		
09-Jul-2012	Kamloops	19 Registered	Attended: 15
	Williams Lake Indian Band	Aaron Higginbottom	<input checked="" type="checkbox"/>
	Williams Lake Indian Band	Kirk Dressler	<input checked="" type="checkbox"/>
11-Jul-2012	Terrace	21 Registered	Attended: 17
	Gitanmaxx Band	Dianne Shanoss	<input checked="" type="checkbox"/>
	Gitanmaxx Band	Pauline Rubinato	<input checked="" type="checkbox"/>
	Gitanyow Band	Mark Starlund	<input checked="" type="checkbox"/>
	Gitwangak	Chief Amanda Zettergreen	<input checked="" type="checkbox"/>
	Gitwangak	Keith Morgan	<input checked="" type="checkbox"/>
	Hagwilget Village	Ken George	<input type="checkbox"/>
	Haisla Nation (Kitimaat)	Keith Nyce, Councillor	<input checked="" type="checkbox"/>
	Kispiox Band Council	Gwen Simms	<input type="checkbox"/>
	Kispiox Band Council	Jordon Muldoe	<input type="checkbox"/>
	Kitselas First Nation	Cora Kennedy	<input checked="" type="checkbox"/>
	Kitselas First Nation	Jason Majore	<input checked="" type="checkbox"/>
	Kitselas First Nation	Judy Gerow	<input checked="" type="checkbox"/>
	Moricetown Band Council	Victor Jim	<input checked="" type="checkbox"/>
	Nisga'a Village of Gingolx	Claude Barton Snr.	<input checked="" type="checkbox"/>
	Nisga'a Village of Gingolx	Peter Stevens Jr.	<input checked="" type="checkbox"/>
	Nisga'a Village of Gitwinksihlkw	Charles Morven	<input checked="" type="checkbox"/>
	Nisga'a Village of New Aiyansh	Brian Tate	<input checked="" type="checkbox"/>
	Nisga'a Village of New Aiyansh	George Williams	<input checked="" type="checkbox"/>
	Nisga'a Village of New Aiyansh	Keith Clayton	<input checked="" type="checkbox"/>
	OFFICE OF THE WET'SUWET'EN	David G Belford	<input type="checkbox"/>
	OFFICE OF THE WET'SUWET'EN	John Ridsdale	<input checked="" type="checkbox"/>
12-Jul-2012	Vancouver	21 Registered	Attended: 20
	Council of Haida Nation/Secretariat of the Haida Nation	Adeana Young	<input checked="" type="checkbox"/>
	Council of Haida Nation/Secretariat of the Haida Nation	John Yeltatzie	<input checked="" type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Joanna Prince	<input checked="" type="checkbox"/>
	Gitksan First Nation	Jako Krushnisky	<input checked="" type="checkbox"/>
	Gitga'at Nation (Hartley Bay)	David Benton	<input checked="" type="checkbox"/>
	KTUNAXA NATION COUNCIL SOCIETY	Norm Fraser	<input checked="" type="checkbox"/>
	N'Quatqua First Nations	Jolene Patrick	<input checked="" type="checkbox"/>
	N'Quatqua First Nations	Melvin Patrick	<input checked="" type="checkbox"/>
	Old Massett Village Council	Alfred Setso	<input checked="" type="checkbox"/>
	Old Massett Village Council	Allan Davidson	<input checked="" type="checkbox"/>
	Old Massett Village Council	Ken Rea	<input checked="" type="checkbox"/>
	Sliammon First Nation	Clint Williams	<input type="checkbox"/>
	STO:LO NATION	Jessica Morrison	<input checked="" type="checkbox"/>
	STO:LO NATION	Mike Goold	<input checked="" type="checkbox"/>
	STO:LO TRIBAL COUNCIL	Matthew Louie	<input checked="" type="checkbox"/>
	Sts'ailes (Chehalis)	Morgan Ritchie	<input checked="" type="checkbox"/>
	Tobacco Plains Indian Band	Denise Birdstone	<input checked="" type="checkbox"/>
	Tobacco Plains Indian Band	Sarah Gravelle	<input checked="" type="checkbox"/>

Integrated Resource Plan Appendix 7G

12-Jul-2012	Vancouver		
12-Jul-2012	Vancouver	21 Registered	Attended: 20
	T'Sou-ke First Nation	Michelle Thut	<input checked="" type="checkbox"/>
	Yale First Nation	Dominic Hope	<input checked="" type="checkbox"/>
	Yale First Nation	Jesse James	<input checked="" type="checkbox"/>
13-Jul-2012	Abbotsford	21 Registered	Attended: 14
	Aitchelitz Band	Chief Angie Bailey	<input checked="" type="checkbox"/>
	Aitchelitz Band	Leona Sam, Councillor	<input checked="" type="checkbox"/>
	Boston Bar First Nation	Terry Raymond	<input checked="" type="checkbox"/>
	Chawathil	Chief Rhoda Peters	<input checked="" type="checkbox"/>
	Chawathil	Shane John	<input type="checkbox"/>
	FIRST NATIONS ENERGY AND MINING COUNCIL	Joanna Prince	<input checked="" type="checkbox"/>
	Heiltsuk Nation	Frances Brown	<input checked="" type="checkbox"/>
	Heiltsuk Nation	Kelly Brown	<input checked="" type="checkbox"/>
	IN-SHUCK-CH TRIBAL COUNCIL	Stephen Jimmie	<input checked="" type="checkbox"/>
	Leq a: mel First Nation	Mike Kelly	<input checked="" type="checkbox"/>
	Matsqui First Nation	Chief Alice McKay	<input type="checkbox"/>
	Matsqui First Nation	Cindy Collins	<input type="checkbox"/>
	Seabird Island Indian Band	Brian Jones	<input type="checkbox"/>
	Seabird Island Indian Band	Jay Hope	<input type="checkbox"/>
	Simpcw First Nation	Chief Rita Matthew	<input checked="" type="checkbox"/>
	STO:LO TRIBAL COUNCIL	Carrie Victor	<input checked="" type="checkbox"/>
	Tzeachten First Nation	Chief Glenda Campbell	<input type="checkbox"/>
	Tzeachten First Nation	Melanie Williams	<input checked="" type="checkbox"/>
	Tzeachten First Nation	Sheila Schmidt	<input type="checkbox"/>
	Yakwekwioose Band	Daniel Kelly	<input checked="" type="checkbox"/>
	Yakwekwioose Band	Mike Watson	<input checked="" type="checkbox"/>

Appendix 7 — Workshop Agendas

BC Hydro 2011 Integrated Resource Plan First Nations Consultation

Date
Location - Venue
 9:00 am to 3:00 pm

Purpose of workshop:

- To share information regarding the development of the 2011 Integrated Resource Plan.
- To engage in open dialogue and capture your input.
- To identify further opportunities to provide input and feedback.

8:30	-	9:00	<i>Registration and Breakfast</i>	
9:00	-	9:15	Welcome and Introductory Remarks	Dan George
9:15	-	9:30	What is the Integrated Resource Plan?	Charlie Weiler
9:30	-	9:45	Developing an Integrated Resource Plan	Nadja Holowaty
9:45	-	10:15	Questions and Answers on the Integrated Resource Plan	Dan George
10:15	-	10:30	<i>Coffee Break</i>	
10:30	-	10:45	<ul style="list-style-type: none"> • Conservation & Efficiency • Electrification 	Nadja Holowaty
10:45	-	11:30	Small Group and/or Plenary Discussion	Dan George
11:30	-	11:45	<ul style="list-style-type: none"> • Electricity Generation Options • Transmission Planning 	Nadja Holowaty
11:45	-	12:30	Small Group and/or Plenary Discussion	Dan George
12:30	-	1:15	<i>Lunch</i>	
1:15	-	1:30	Export Market Potential	Nadja Holowaty
1:30	-	2:00	Small Group and/or Plenary Discussion	Dan George
2:00	-	2:10	Clean or Renewable Energy Development	Charlie Weiler
2:10	-	2:45	Small Group and/or Plenary Discussion	Dan George
2:45	-	3:00	Next Steps & Closing	Charlie Weiler

**BC Hydro 2012 Draft Integrated Resource Plan
 First Nations Workshop**

July 12, 2012
Vancouver – SFU School of Business
 8:30 am to 2:30 pm

Purpose of workshop:

- To seek your feedback on the Recommended Actions in BC Hydro's 2012 Draft Integrated Resource Plan

8:30	-	8:45	<i>Registration</i>	
8:45	-	9:00	Welcome and Introductory Remarks	Dan George
9:00	-	9:30	Development of the Draft 2012 Integrated Resource Plan	Charlie Weiler
9:30	-	10:00	The Draft Integrated Resource Plan	Kristin Hanlon
10:00	-	10:15	<i>Coffee Break</i>	
10:15	-	11:00	Conserve More Draft Actions	Kristin Hanlon
11:00	-	12:00	Build & Reinvest More in Existing Assets Draft Actions	Kristin Hanlon
12:00	-	12:30	<i>Lunch</i>	
12:30	-	1:15	Buy More Draft Action	Kristin Hanlon
1:15	-	2:15	Prepare For Potentially Greater Demand Draft Actions	Kristin Hanlon
2:15	-	2:30	Integrated Resource Plan Next Steps & Closing	Dan George

Note: The agenda items include time for questions, comments and facilitated discussion.

Appendix 8 — Workshop Presentations



Integrated Resource Plan First Nations Workshop

March 16, 2011

Quality Inn Northern Grand – Fort St. John, B.C.

BC hydro 

FOR GENERATIONS

Welcome & Introductory Remarks

Dan George

INDEPENDENT/NEUTRAL FACILITATOR

The role of Four Directions Management Services is to facilitate an inclusive, respectful and safe process where community voices can be heard concerning the Integrated Resource Plan (IRP).

The role of FDMS does not include the promotion or marketing of the IRP.

Rules of Engagement

- ▶ Challenge ideas, not people
- ▶ Participate
- ▶ Stay focused and in process
- ▶ Be positive and open
- ▶ Be solution-oriented
- ▶ One conversation at a time
- ▶ Listen generously
- ▶ Encourage new ideas; build on the ideas of others
- ▶ Observe time limits; stick to the agenda
- ▶ Ensure that everyone gets heard
- ▶ See situation from a perspective other than your own



Systems Thinking Multiple Perspectives

Our Teachings



The View from the Treetops
"Defining Space"

The View from the Mountaintops
"Making Space"

The View from the River's Edge
"Getting Results"

Colleen Stevenson

What is the Integrated Resource Plan?

Charlie Weiler

What is the Integrated Resource Plan?

- BC Hydro's 20-year plan to meet future electricity needs
- Planning at the province-wide strategic level
- Flexible enough to respond to future uncertainties
- The Integrated Resource Plan will be renewed periodically

What the Integrated Resource Plan is Not?

- Does not commit BC Hydro to any particular project
- Approval of the Integrated Resource Plan does not approve any particular project
- Specific projects are subject to their own unique approval processes

Why an Integrated Resource Plan?

- In order to meet future demand BC Hydro needs to plan ahead
- It can take 5 to 7 years to build a new generation facility and even longer to build transmission
- Helps set the strategic direction for BC Hydro

How is the Integrated Resource Plan Developed?

**Planning
context**



BC Hydro's goal is to provide clean, reliable, cost effective electricity to its customers

**How much
electricity is
needed?**

**How can
needs be
met?**

**Which Options
best meet
needs?**

Plan

BC Hydro 

FOR GENERATIONS

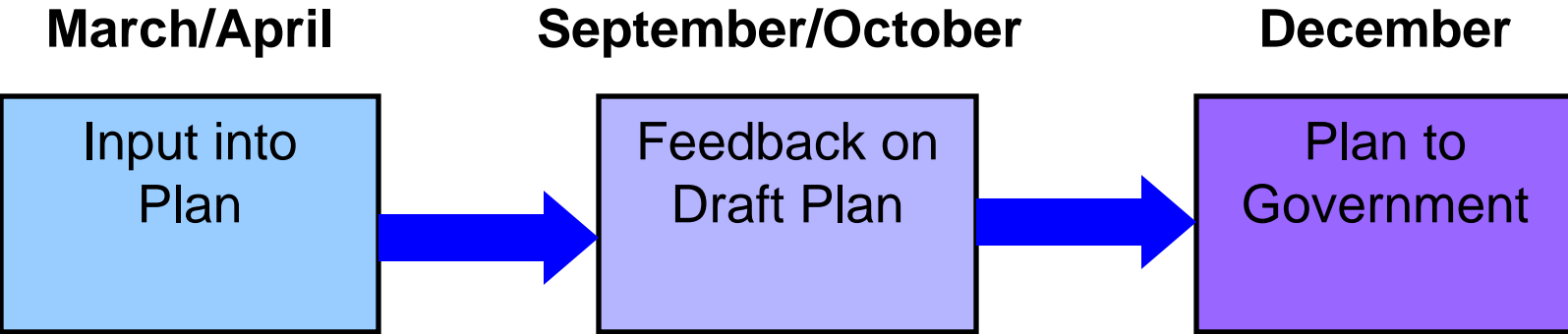
Clean Energy Act - guided by 16 provincial Energy objectives i.e.

- Achieve electricity self-sufficiency by 2016
- Reduce greenhouse gas emissions
- Foster the development of First Nation and rural communities through the use and development of clean or renewable resources
- Be a net exporter of clean electricity from clean or renewable resources

Consultation on the Integrated Resource Plan

- There are three consultation streams
 - First Nations
 - Technical
 - Public and Stakeholder
- Opportunities for input
 - First Nations Regional Workshops
 - Written comments
 - Participation in public and stakeholder stream

Consultation on the Integrated Resource Plan



Ongoing Consultation with First Nations

- BC Hydro will consult with First Nations on any future BC Hydro projects that may impact their asserted aboriginal rights and title

Why are we here today?

- Listen generously and respectfully
- Engage in an solution-based dialogue
- Seek your input on the development of the Integrated Resource Plan
- The 5 key topics are:
 - Conservation and Efficiency
 - Electrification
 - Electricity Generation Options
 - Transmission Planning
 - Export Market Potential

Developing an Integrated Resource Plan

Nadja Holowaty

What are the Integrated Resource Planning Steps?

Planning context

How much electricity is needed?

How can needs be met?

Which Options best meet needs?

Plan



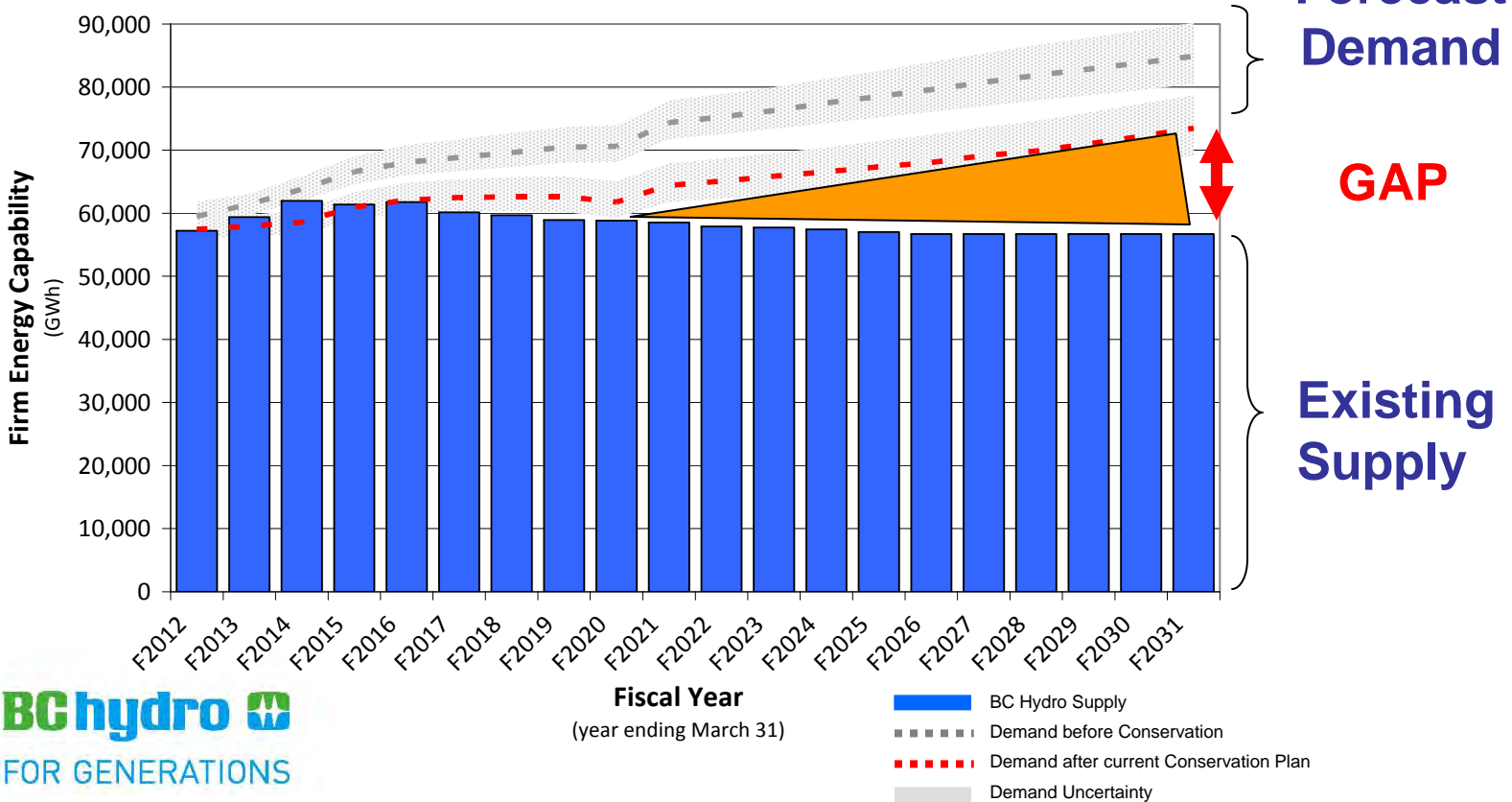
Forecast **Demand** compared to existing **Supply**: Is there a **GAP**?



FOR GENERATIONS

What is the Future Need? The Gap

How much electricity is needed?



What are the Integrated Resource Planning Steps?

Planning context

How much electricity is needed?

How can needs be met?

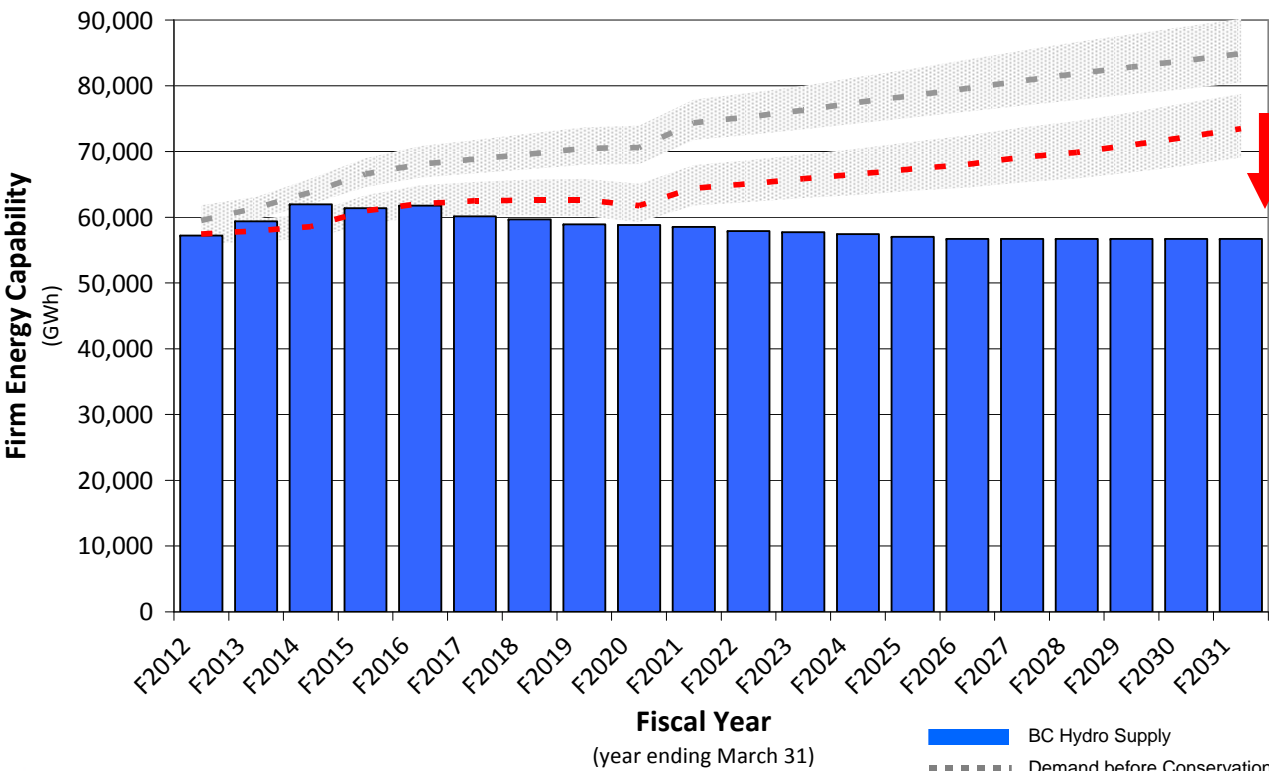
Which Options best meet needs?

Plan



How to fill the GAP ?
Mix of potential **Demand** and **Supply** options

How can needs be met – Conservation & Efficiency

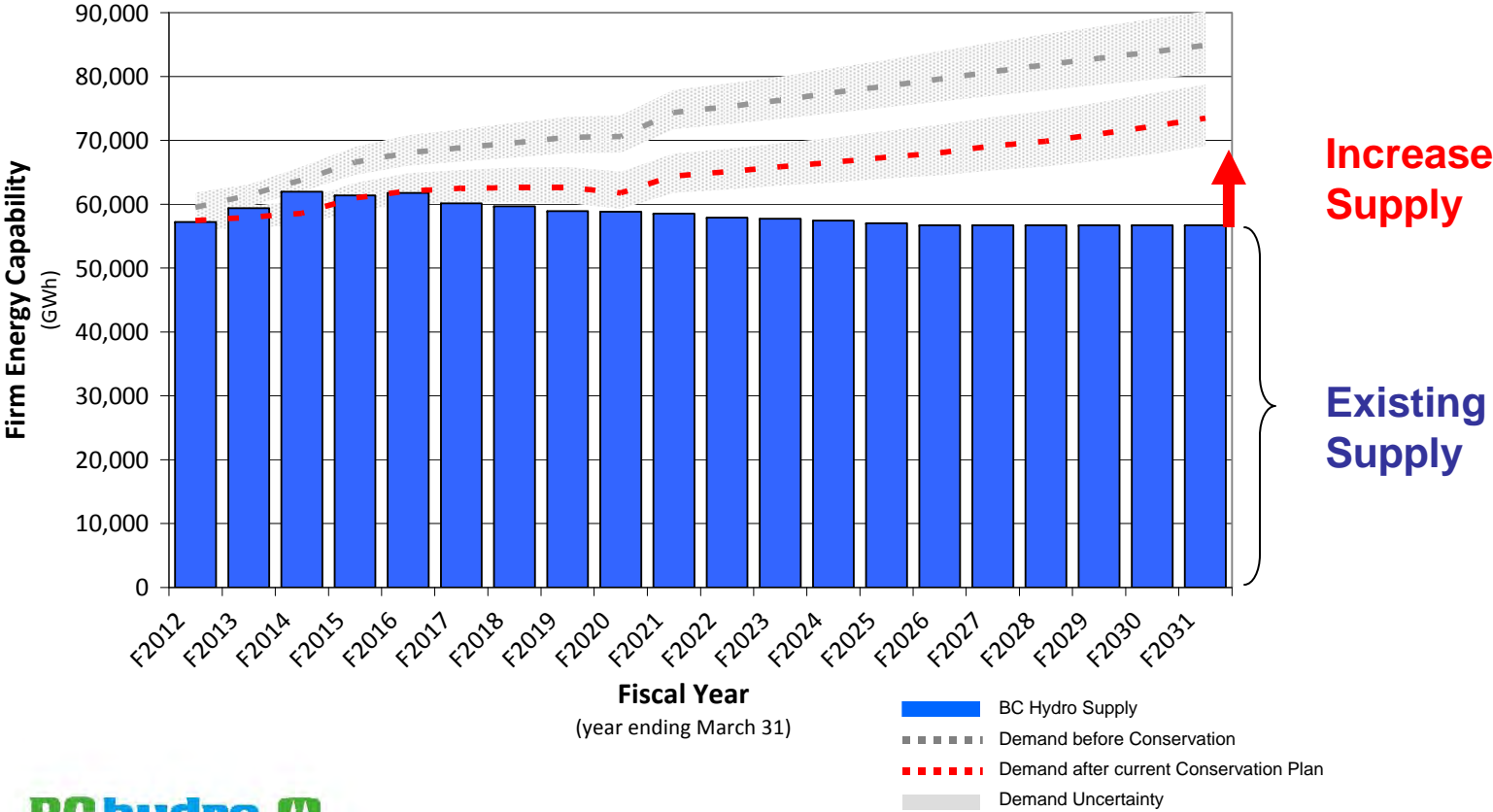


Conservation & Efficiency reduces demand

Reduce Demand Further?



How can needs be met – Electricity Generation



What are the Integrated Resource Planning Steps?

Planning context

How much electricity is needed?

How can needs be met?

Which Options best meet needs?



Which blend of future resources will best fill the gap?

Plan



What are the Integrated Resource Planning Steps?

Planning context

How much electricity is needed?

How can needs be met?

Which Options best meet needs?

Plan



Renewed periodically



Key topics for today's discussion

- Conservation & Efficiency
- Electrification
- Electricity Generation Options
- Transmission Planning
- Export Market Potential

Development of the Integrated Resource Plan

Questions & Answers – Integrated Resource Plan

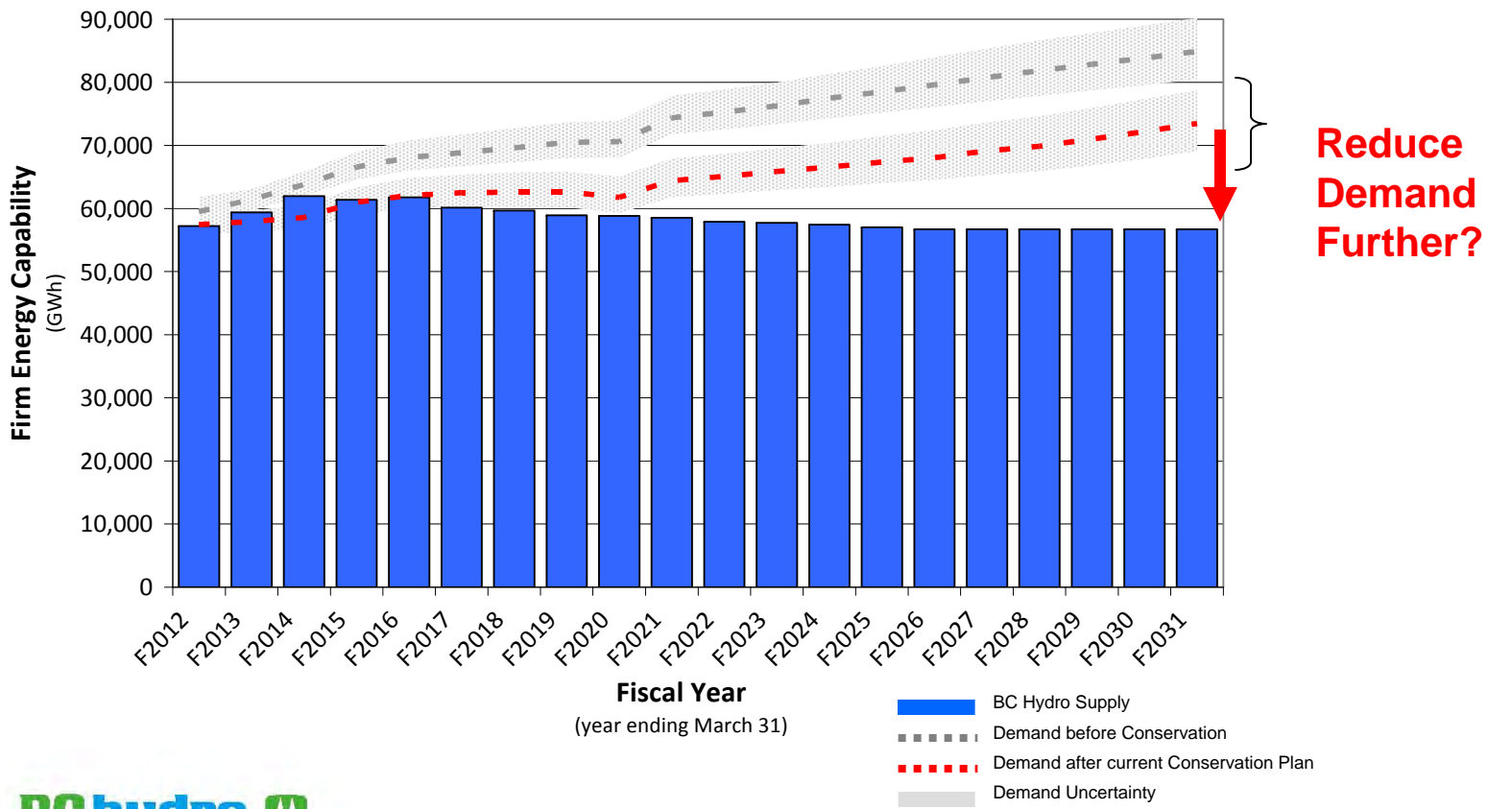
Integrated Resource Planning Topics

- Conservation & Efficiency

Nadja Holowaty

Conservation and Efficiency: A closer look

Conservation & Efficiency = Demand Side Management



Approaches to Conservation & Efficiency

- **Current Approach to Conservation & Efficiency**
 - Expected savings ~ 79% load growth 2020
 - Regulations, rates and Power Smart programs
 - Moderate uncertainty that expected savings will materialize
- **Greater Conservation & Efficiency:** to achieve significantly higher energy savings from current targets, BC Hydro would have to:
 - Expand Power Smart programs to help consumers find savings
 - Send stronger rate signals through specially designed electricity conservation rates
 - Request that the provincial and federal governments increase commit to bring in new regulations



FOR GENERATIONS

Integrated Resource Planning Topics

- **Electrification**

Nadja Holowaty

Electrification: What, Where, When?

What?

- Switching from other fuel sources to electricity

Where?

- Electric vehicles – currently 38% of B.C. emissions from transportation
- Air and ground source heat pumps
- Electric compressors can replace natural gas
- Shore power for ships

When?

- Equipment changes over the short, medium, or long term
- Government and BC Hydro actions can influence the rate at which electrification occurs



FOR GENERATIONS

Approaches to Electrification

- **Responsive Approach** – Currently BC Hydro responds to customer needs
- **Proactive Electrification Approach** – BC Hydro would work with government and other partners to promote and encourage increased efficient electrification

Facilitated Discussion

- Conservation and Efficiency
- Electrification



FOR GENERATIONS

Integrated Resource Planning Topics

- **Electricity Generation Options**

Nadja Holowaty

Potential Resources Options

Biomass	Wood-Based, Biogas, Municipal Solid Waste
Wind	Onshore, Offshore
Geothermal	Geothermal
Thermal	Natural Gas, Coal with Carbon Capture & Sequestration
Hydro	Run of River, Pumped Storage, Site C, Resource Smart
Ocean	Wave, Tidal
Hydrokinetic	Hydrokinetic (in-stream)
Other	Storage Technologies, Solar
Transmission	Bulk transmission options

Energy and Capacity

- BC Hydro must plan to meet both future “energy” and “capacity” needs
- “Energy” is electricity that is available at all times
- “Capacity” is the maximum amount of electricity that can be generated at any one time
- Sources of dependable capacity include:
 - Large Hydro with Reservoir
 - Pumped Storage
 - Natural Gas



FOR GENERATIONS

Example Portfolio - Renewable Mix



A mix of potential renewable resources such as wind and run-of river from Independent Power Producers. Site C project is specifically excluded.



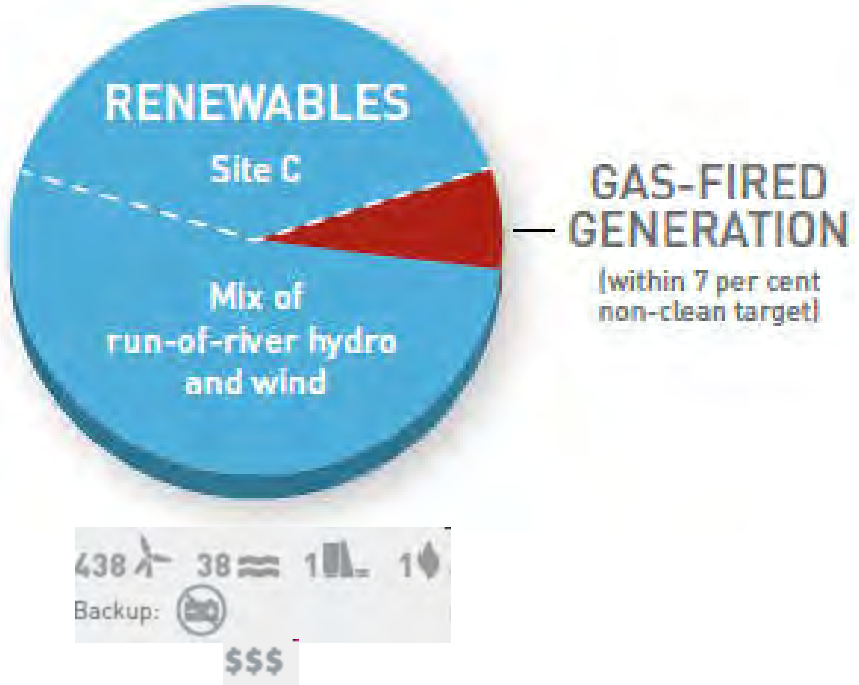
FOR GENERATIONS

Example Portfolio – Renewable Mix with Site C



This portfolio includes a mix of renewable resources that include Site C along with wind, run-of-river and biomass projects from Independent Power Producers.

Example Portfolio – Renewable Mix with Site C and Gas-Fired Generation



This portfolio includes Site C, other potential renewable resources such as wind and run-of-river from Independent Power Producers and gas-fired generation allowable under *Clean Energy Act* limits.



Integrated Resource Planning Topics

- **Transmission Planning**

Nadja Holowaty

Transmission Planning

- Need to ensure the energy produced can be delivered to customers
- BC Hydro's Integrated Resource Plan will assess:
 - Province wide transmission system needs
 - Demand driven regional requirements (Northeast B.C.)
 - Generation driven regional requirements (Identify potential clusters of projects)



FOR GENERATIONS

Different Approaches - Bulk Transmission Planning

- **Responsive Approach:**

- BC Hydro develops transmission plans in response to forecast need

- **Proactive Approach:**

- BC Hydro develops long-term transmission plans in anticipation of potential future need, over a 30-year horizon

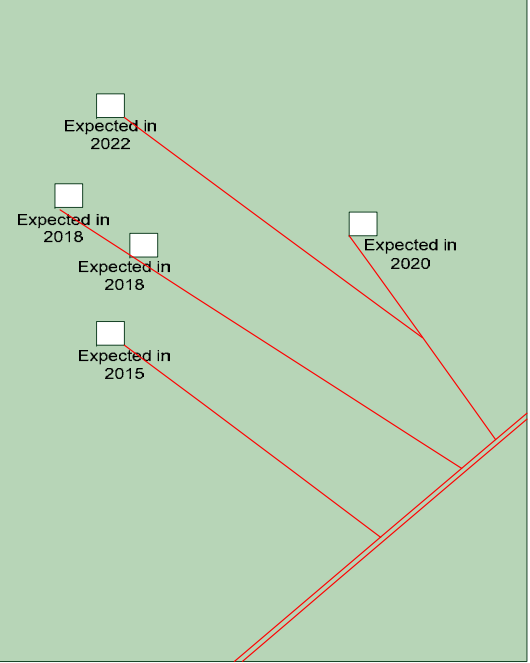
While BC Hydro is likely to use both approaches going forward, emphasis can be placed on one or the other.



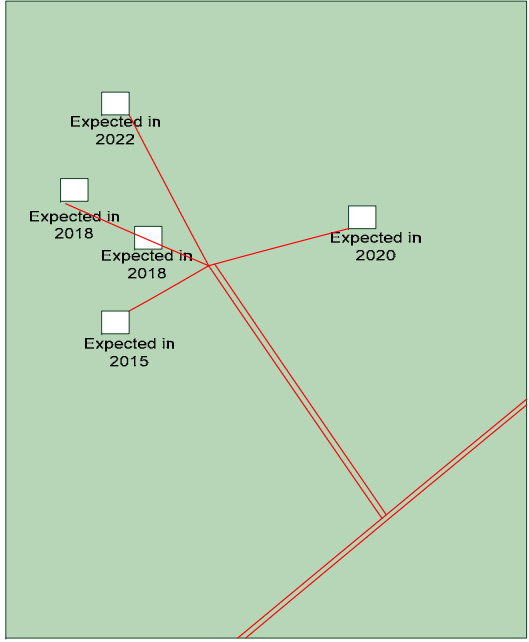
FOR GENERATIONS

Transmission Approaches

Responsive



Proactive



Connecting the Northeast

- Key considerations for Transmission Planning:
 - Long build times
 - Potential for economic development in the region
 - Potential for attracting clean resource potential
- Northeast currently not connected to the grid
- No proposed route
- No Certificate of Public Convenience and Necessity (CPCN) application
- IRP will look at the merits of further studies or approval applications



FOR GENERATIONS

Facilitated Discussion

- Electricity Generation Options
- Transmission Planning

Integrated Resource Planning Topics

Export Market Potential

Nadja Holowaty

BC Hydro's Electricity Trade to Date

- BC Hydro through its wholly owned subsidiary Powerex, has been importing and exporting electricity for many years
- The energy stored in large reservoirs gives BC Hydro the flexibility to trade electricity
- BC Hydro can make the best use of its resources by importing electricity when electricity prices are lower and exporting when prices are higher

Approaches to Export

- **Current Approach to Export:**
 - These are exports of surplus energy during times when BC Hydro has excess water in the hydroelectric system, including energy that is acquired to achieve the legal requirement of self-sufficiency by 2016 with an additional 3,000 GWh of “insurance” by 2020
- **Clean Generation for the Purpose of Export:**
 - These are exports that would come from the aggregation of renewable energy from Independent Power Producers in B.C. for the sole purpose of long-term export contracts

Export Market Potential

- The ***Clean Energy Act*** directs BC Hydro to assess the potential export market for electricity through:
 - An assessment of the demand for renewable energy in markets BC Hydro can serve
 - An estimate of market share BC Hydro might capture
 - An estimate of the expenditures that will be required to undertake exports beyond traditional exports
- BC Hydro may also acquire, subject to Cabinet approval, renewable energy from Independent Power Producers in B.C. for the sole purpose of exporting to Alberta or the U.S.
- The ***Clean Energy Act*** protects existing BC Hydro ratepayers from the cost risks associated with energy purchased solely for export



FOR GENERATIONS

Facilitated Discussion

- Export Market Potential

Clean or Renewable Energy Development

Charlie Weiler

Clean or Renewable Energy Development

- ***Clean Energy Act*** objective to foster the development of First Nation and rural communities through the use and development of clean or renewable resources
- BC Hydro wants to understand your perspective on the use and development of clean or renewable resources
- What are your interests in clean or renewable energy development for your community?



FOR GENERATIONS

Facilitated Discussion

Clean or Renewable Energy Development

Integrated Resource Plan Next Steps

Charlie Weiler

First Nations Consultation Schedule

Mar 2-21, 2011	<ul style="list-style-type: none"> Regional Workshops in 9 communities – input into the Draft Integrated Resource Plan
Apr 8, 2011	<ul style="list-style-type: none"> Send meeting notes to participants
Apr 30, 2011	<ul style="list-style-type: none"> Submit written comments by end of April
May 30, 2011	<ul style="list-style-type: none"> Summary of consultation posted on website
Sept-Oct, 2011	<ul style="list-style-type: none"> Regional Workshops on Draft Integrated Resource Plan
Dec 3, 2011	<ul style="list-style-type: none"> Integrated Resource Plan to government



April 30, 2011
Send your comments to
2011irp@bchydro.com

Additional Opportunities for Input

- Attend a public open house
- Send us your written comments:
 - Email: 2011irp@bchydro.com
 - Fax: 604-528-2822
- Visit www.bchydro.com/irp



Draft Integrated Resource Plan First Nations Workshops

July 12, 2012

SFU Segal Centre – Vancouver, BC





Welcome & Introductory Remarks

Dan George

Dan George

Independent / Neutral Facilitator



The role of Four Directions Management Services is to facilitate an inclusive, respectful and safe process where community voices can be heard concerning the Draft Integrated Resource Plan.

The role of Four Direction Management Services does not include the promotion or marketing of BC Hydro's Draft Integrated Resource Plan.

Opening Thought



- Dialogue can help you uncover the un-discussed thinking of the people in your group.
- The problems we face today are too complex to be managed by one person. We require more than one brain to solve them.
- Dialogue seeks to harness the “**collective intelligence**” of the people around you; together we are more aware and smarter than we are on our own.

Rules of Engagement



- Challenge ideas, not people
- Participate
- Stay focused and in process
- Be positive and open
- Be solution-oriented
- One conversation at a time
- Listen generously
- Encourage new ideas; build on the ideas of others
- Observe time limits; stick to the agenda
- Ensure that everyone gets heard
- See situation from a perspective other than your own



Systems Thinking Multiple Perspectives

Our Teachings



The View from the Treetops
"Defining Space"

The View from the Mountaintops
"Making Space"

The View from the River's Edge
"Getting Results"

Lolleen Stevenson



Systems Thinking
Multiple Perspectives

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Colleen Stevenson



Systems Thinking
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Colleen Stevenson



How Did We Get Here?



- 2010** Provincial Clean Energy Act requires BC Hydro to develop an Integrated Resource Plan
- 2011** BC Hydro seeks input on key planning topics from First Nations, Public, and Stakeholders
- 2011/2012** BC Hydro considers input along with other planning and legislative requirements and develops the Draft Integrated Resource Plan
- 2012** BC Hydro seeks feedback on the Draft Integrated Resource Plan

Why Are We Here Today?



- Review the input we received from you in developing the Draft Integrated Resource Plan
- Review the Draft Integrated Resource Plan
- Seek your feedback on the Recommended Actions in the Draft Integrated Resource Plan
- Listen generously and respectfully to your feedback
- Engage in a solution-based dialogue

Agenda for Today



- What is an Integrated Resource Plan
- Review of Input received from First Nations
- Development of the Draft Integrated Resource Plan
- Recommended Actions in the Draft Integrated Resource Plan
- Next Steps before the Integrated Resource Plan is submitted to Government for approval

Development of the Integrated Resource Plan

Charlie Weiler

What Is An Integrated Resource Plan



- A plan to meet customers' needs for electricity in British Columbia over the next 20 years
- Updated at least every 5 years to be responsive to change in circumstances, such as legislation, policy direction, forecast demand for electricity, and other drivers

BC Hydro's Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements.

Why Is An Integrated Resource Plan Needed



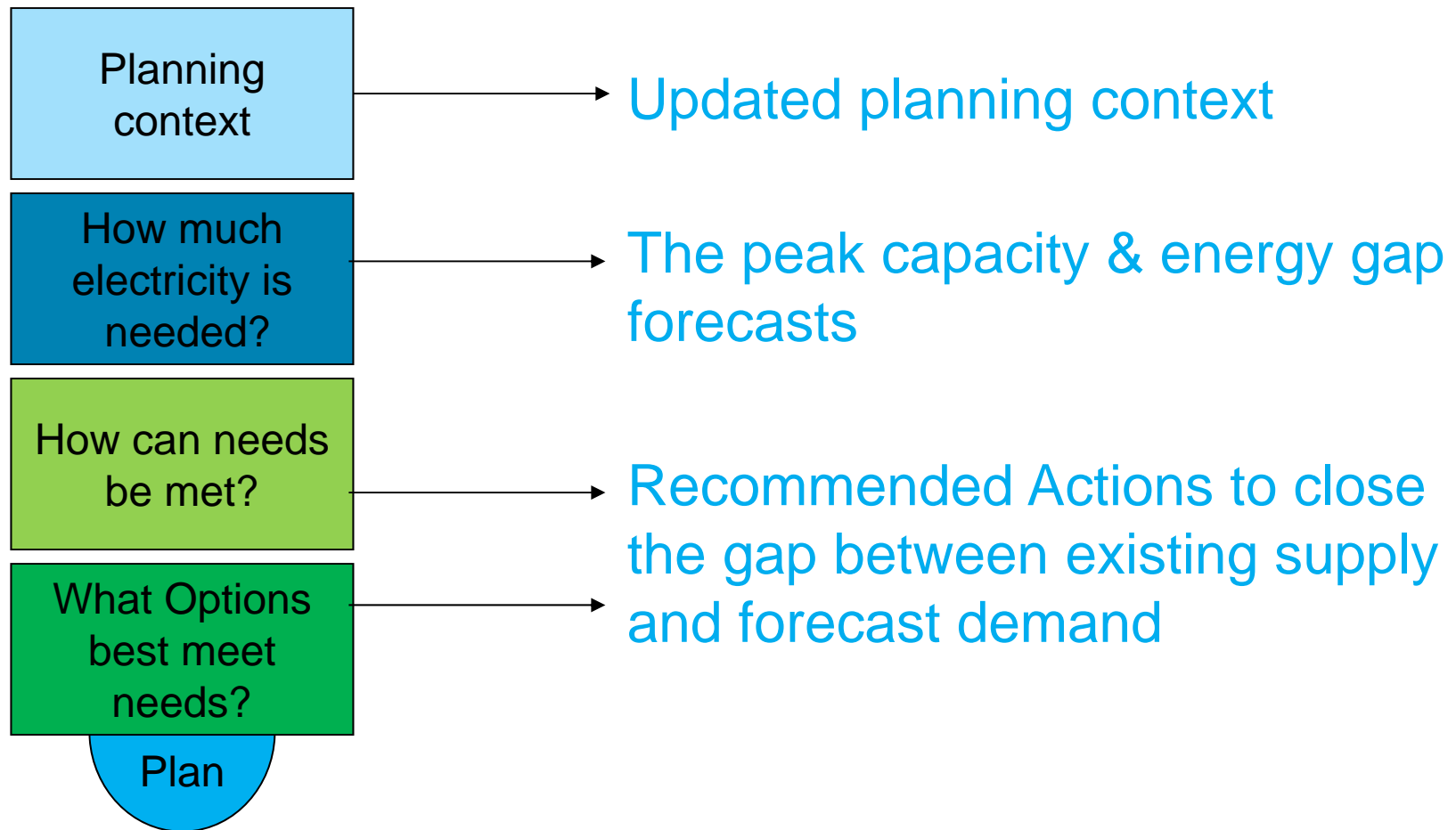
- To ensure British Columbians continue to receive cost-effective, reliable electricity over the long term
- To meet future electricity demand, BC Hydro needs to plan ahead
- Generation facilities can take 5-7 years to build; transmission even longer
- Provides strategic direction for BC Hydro

Building Blocks of an Integrated Resource Plan



2011 Dialogue Framework

2012 Dialogue Framework



First Nations Input

We received input on the following topics:

- Conservation & Efficiency
- Electricity Generation Options
- Electrification
- Transmission Planning
- Export Market Potential
- Clean or Renewable Energy Development in First Nation Communities
- Consultation Process

Additional information is available in the BC Hydro Integrated Resource Plan First Nations Consultation Interim Report at:
www.bchydro.com/irp

First Nations Input on Planning Topics – General Themes



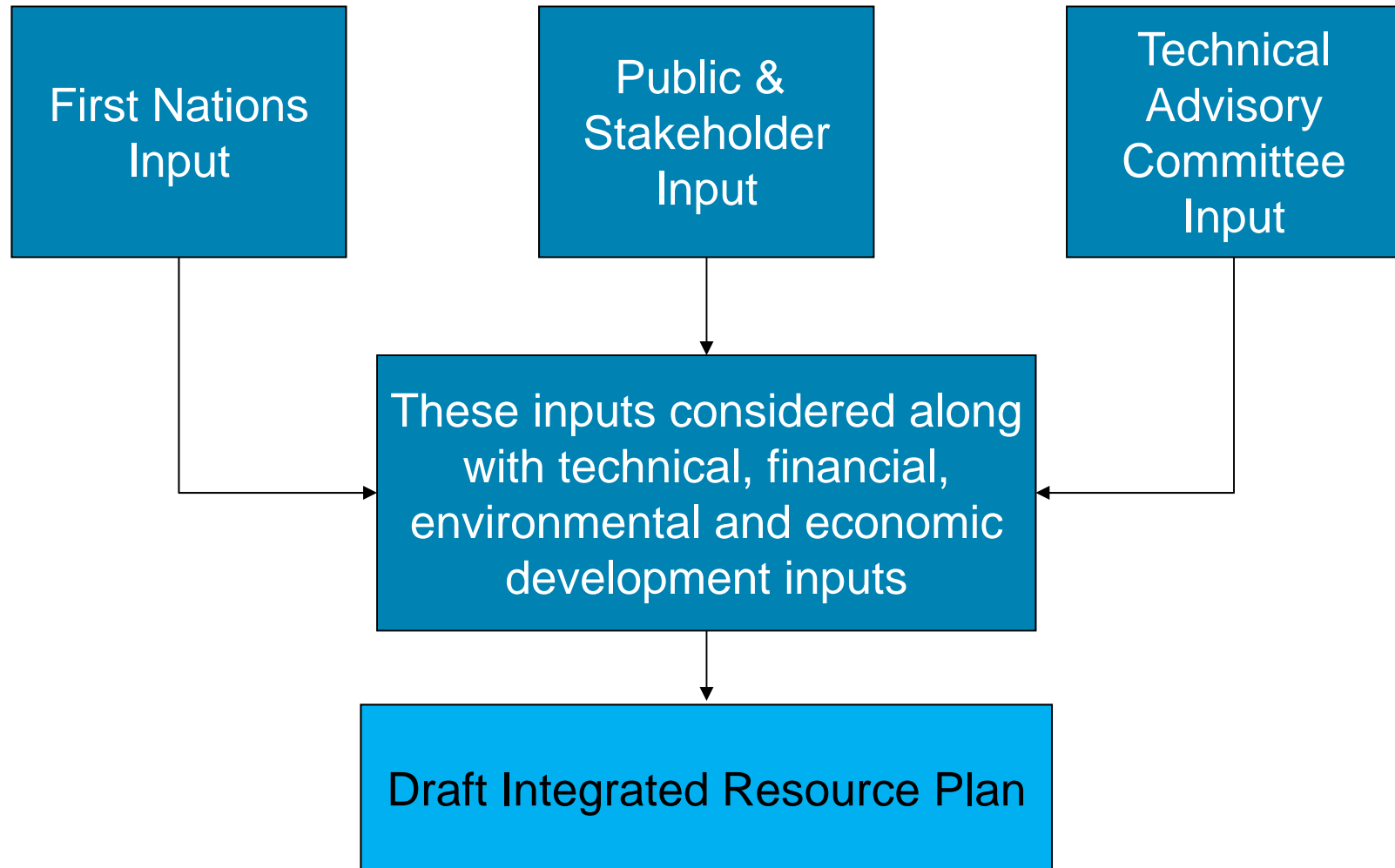
- **Participation in Economy**
 - Creating jobs/revenue through participation in clean/renewable energy development
 - Interest in procurement and employment opportunities with BC Hydro
- **Environmental Protection**
 - Support for actions that reduce greenhouse gas emissions
 - Widespread support for conservation and efficiency
 - Minimize environmental footprint
 - Perceived conflict between conservation and economic development
- **Cultural Continuity**
 - Importance of maintaining traditional way of life
 - First Nations identity is inextricably intertwined with the land

First Nations Input on Planning Topics – General Themes



- **Local Decision Making**
 - Perception that development benefits urban areas at the expense of First Nations' communities
 - Site C development not supported, needs consent of First Nations in project area
 - Preference for planning from a First Nations' territory view
- **Affordable & Reliable Electricity**
 - Preference for low electricity rates
 - Need for affordable energy efficiency upgrades
 - Reliable electricity service in First Nations communities
- **Consultation Process**
 - Significant concern and disagreement with BC Hydro's characterization of this process as 'consultation'

Development Of The Draft Integrated Resource Plan



What's In The Draft Integrated Resource Plan



The Draft Integrated Resource Plan:

- Seeks greater conservation and efficiency
- Maintains competitive rates
- Fosters economic development through clean or renewable energy development
- Includes dependable & flexible sources of electricity

The Draft Integrated Resource Plan does not address:

- Energy planning from a First Nations territorial view
- Specific energy acquisition strategies
- The design of Power Smart programs

BC Hydro's Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements.

First Nations Influence BC Hydro's Business



- Consultation on capital projects
- Electricity supply to remote communities
- Aboriginal employment
- Training opportunities
- Enhanced Aboriginal customer care
- Aboriginal procurement
- Internal cross-cultural training
- Sponsorships & donations
- Aboriginal scholarships
- GIS data on Resource Options available on BC Hydro website*

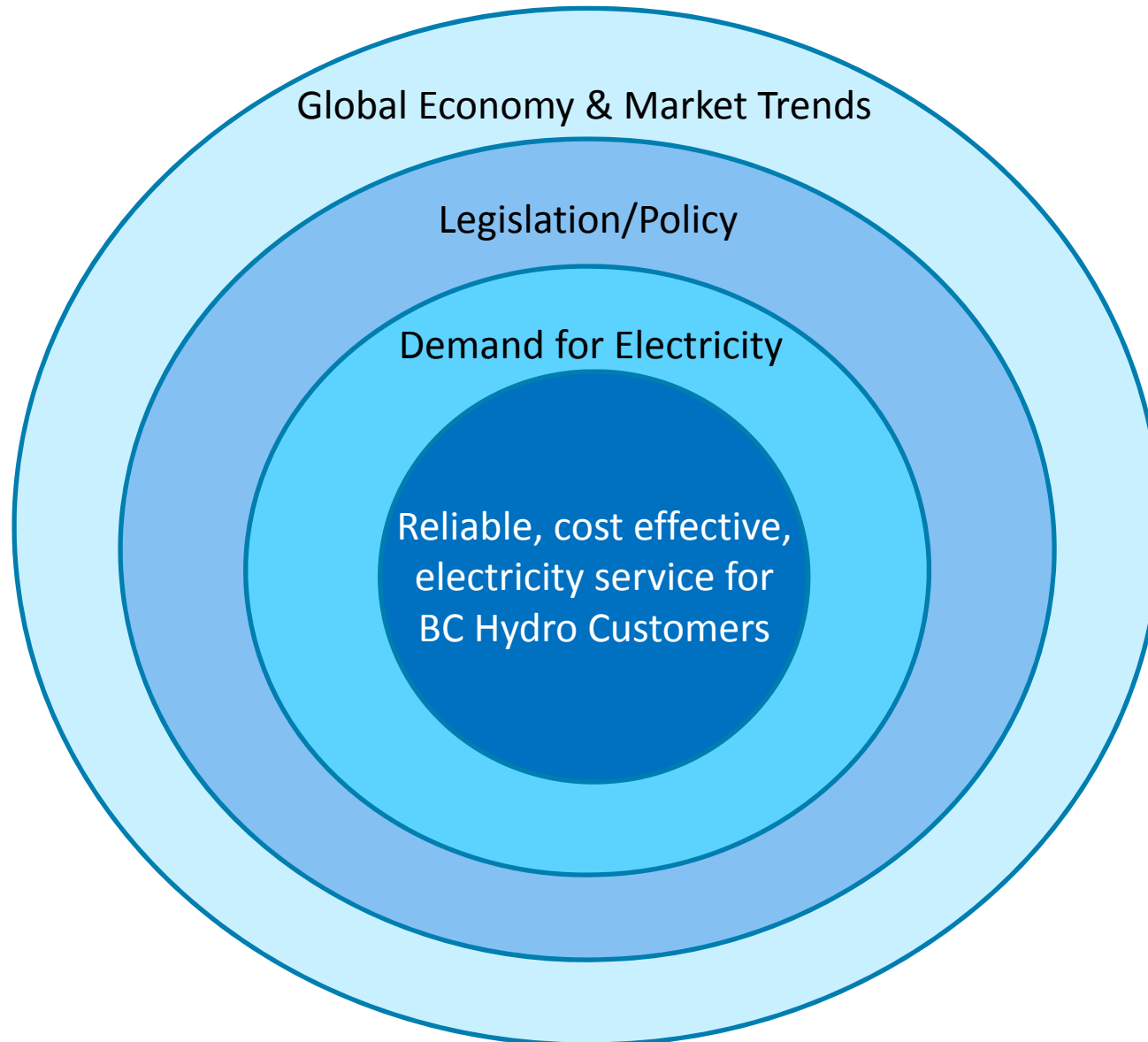
*see handout for website link

Comments & Questions

Draft Integrated Resource Plan

Kristin Hanlon

Planning Context



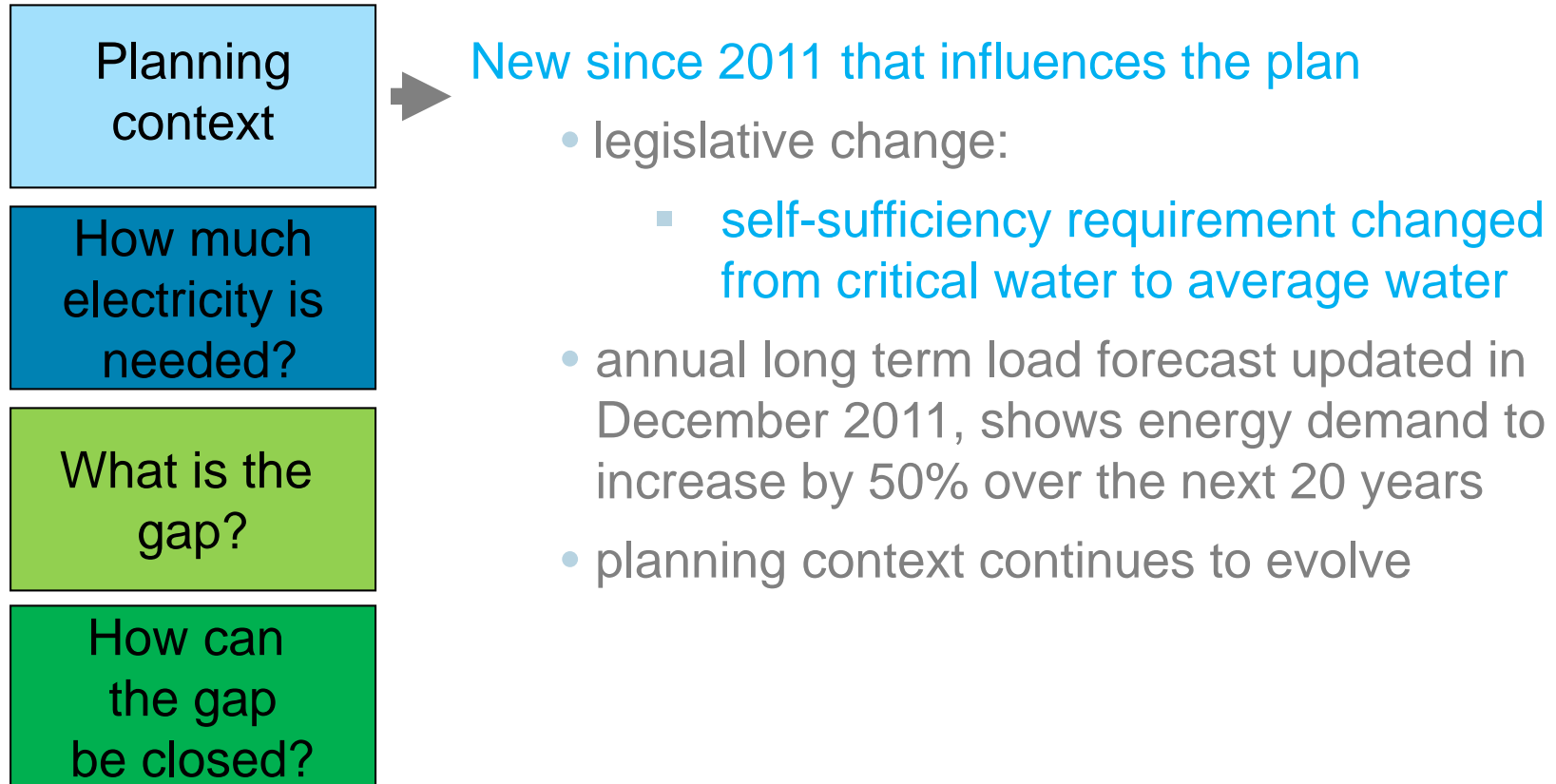
Planning Context



B.C.'s Clean Energy Act

- Self-sufficient by 2016
- 93% of all electricity from clean or renewable resources
- Keep rates competitive
- 66% of increased demand through conservation/efficiency
- Use renewables to help achieve GHG reduction targets
- Foster development of First Nations and rural communities through use of and development of clean or renewable resources

The Draft Integrated Resource Plan



Energy and Peak Capacity

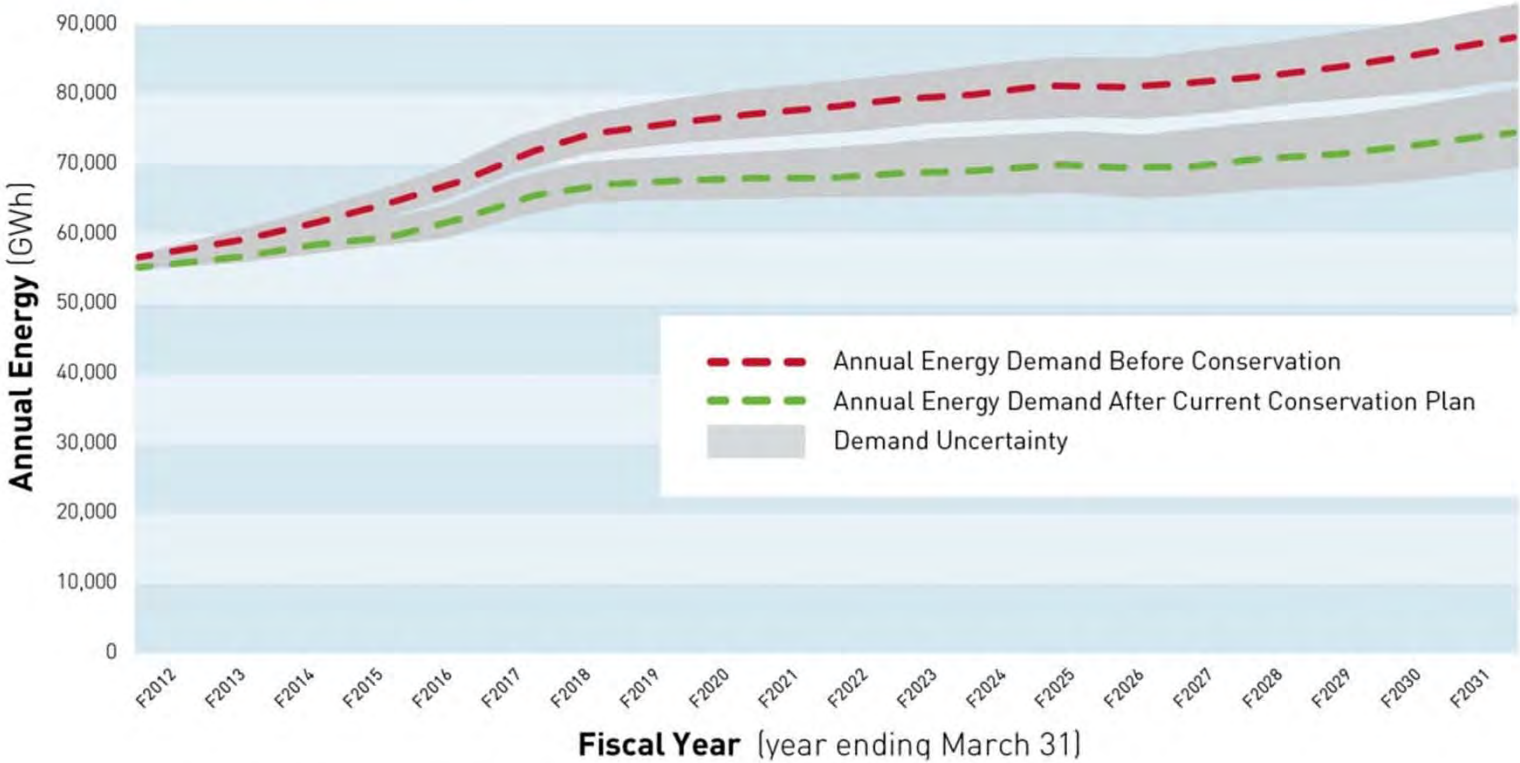


- BC Hydro must plan to meet both future “energy” and “peak capacity” needs
- “Energy” is the total amount of electricity that can be generated over a certain period of time
- “Peak Capacity” is the maximum amount of electricity that can be generated at any one time
- Sources of dependable peak capacity include:
 - Large Hydro with Reservoir
 - Pumped Storage
 - Natural Gas

How Much Electricity is Needed



ANNUAL ENERGY FORECAST

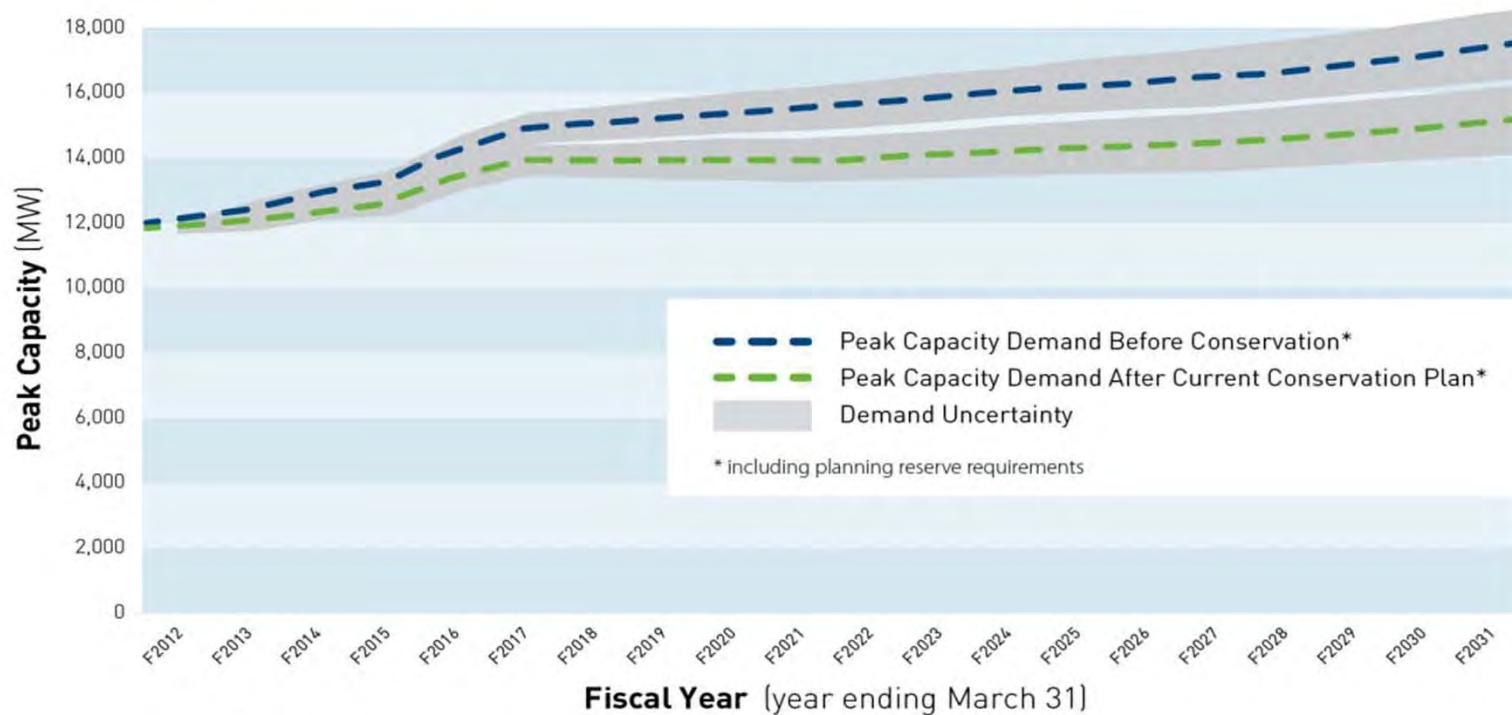


Source: BC Hydro December 2011 Long-Term Load Forecast

How Much Electricity is Needed



PEAK CAPACITY FORECAST

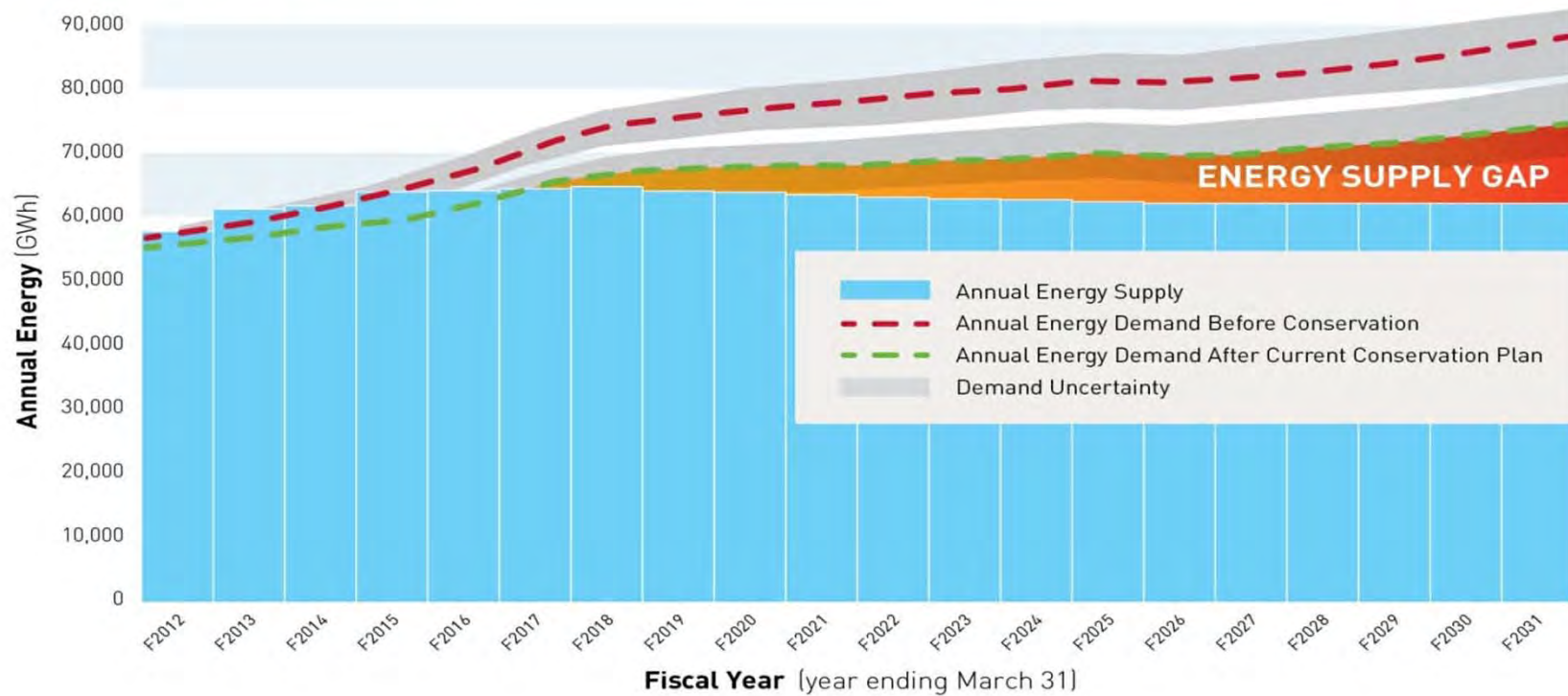


Source: BC Hydro December 2011 Long Term Load Forecast

What is the Energy Supply Gap



THE FORECAST ENERGY GAP



Comments & Questions

Draft Recommended Actions

Kristin Hanlon

The Draft Recommended Actions



Recommended actions to address the forecast energy and peak capacity gaps

- Conserve More
- Build and Reinvest More in Existing Assets
- Buy More

Prepare for Potentially Greater Demand

BC Hydro's Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements.

The Draft Recommended Actions



Considerations:

- Technical Specifications (e.g., Reliability)
- Cost
- Effect on Provincial Energy Objectives
- Environmental Attributes
- Economic Development Attributes
- First Nations, Stakeholder, Public and Technical Advisory Committee Input

CONSERVE MORE



Reduce Energy Consumption

RECOMMENDED ACTION #1:

- a) Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.
- b) Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours

- *See feedback form p. 3*

- Clean & cost-effective compared to other options
- Program effectiveness is linked to behaviour

CONSERVE MORE



Encourage Less Consumption During Periods of Peak Demand

RECOMMENDED ACTION #2:

Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

- *See feedback form p. 4*

- Improve voluntary programs designed to reduce peak demand or shift demand away from peak hours.

CONSERVE MORE



Facilitated Discussion
on
Conserve More
Recommended Actions

BUILD AND REINVEST MORE



Site C

RECOMMENDED ACTION #3:

- Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown's duty to consult and, where appropriate, accommodate Aboriginal Groups

- *See feedback form p. 5*

- Lower cost clean energy and capacity
- Dependable and flexible resource to backup wind and run-of-river hydro
- Supports self sufficiency and climate change goals
- Projected to provide 35,000 direct and indirect jobs

BUILD AND REINVEST MORE



Resource Smart

.....
RECOMMENDED ACTION #4:

Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.

.....

RECOMMENDED ACTION #5:

Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.

.....

- *See feedback form p. 5-6*

- Upgrades the existing system
- Cost effective energy and peak capacity
- Generally low or no incremental environmental footprint

BUILD AND REINVEST MORE



Combine Readily Available Resources to Fill Short Term Capacity Gap

RECOMMENDED ACTION #6:

Fill the short term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation

- See feedback form p. 6

- Short-term capacity gap emerges in 2015 before new projects such as Revelstoke 6 and Site C come online

BUILD AND REINVEST MORE



Transmission Requirements

.....
RECOMMENDED ACTION #7:
Reinforce the existing 500-kilovolt line from
Prince George to Terrace to meet new
demand on the north coast
.....

- *See feedback form p. 7*

- The existing 500-kilovolt line from Prince George to Terrace will need to be reinforced to meet new demand on the north coast

Facilitated Discussion
on
Build and Reinvest More
Recommended Actions

BUY MORE Made-in-B.C. Power



.....
RECOMMENDED ACTION #8:

Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2016–2018 time period.

.....
Final decisions on the timing, and the volume of energy will be made once there is more certainty regarding projected new electricity loads.

- See feedback form p. 7

- Helps further close the gap
- Supports economic development through clean or renewable energy development

BUY MORE Made-in-B.C. Power



Facilitated Discussion on Buy More Made-in B.C. Power Recommended Actions

Prepare for Potentially Greater Demand

Kristin Hanlon

PREPARE FOR POTENTIALLY GREATER DEMAND

FOR GENERATIONS

North Coast: Liquefied Natural Gas Development

.....
RECOMMENDED ACTION #9: Continue to work with Liquefied Natural Gas developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically:

- a. Undertake work to maintain the earliest in-service date for a new 500-kv transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.
 - b. Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019–2020 time frame, should it be needed.
-

- Two Liquefied Natural Gas facilities are included in base resource plan
- This recommended action addresses what if a third Liquefied Natural Gas facility requests service or a number of new mines come online.

- *See feedback from p. 8*

PREPARE FOR POTENTIALLY GREATER DEMAND

FOR GENERATIONS

Northeast: Natural Gas Extraction

RECOMMENDED ACTION #10:

Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

- *See feedback form p. 9*

- The Horn River Basin: a large area northeast of Fort Nelson not currently connected to BC Hydro's integrated transmission system
- Potential large, new natural gas extraction could emerge in the Horn River Basin in northeast B.C. and seek electrical power from BC Hydro

PREPARE FOR POTENTIALLY GREATER DEMAND

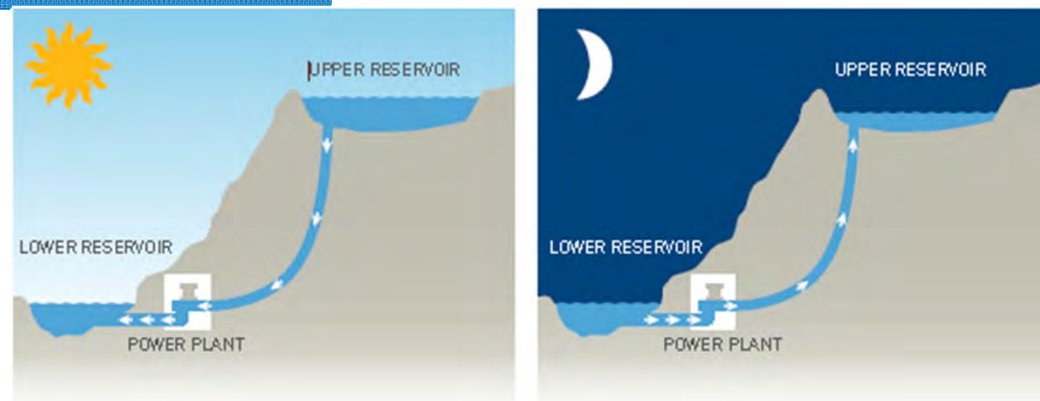
FOR GENERATIONS

Peak Capacity Resource Options

.....
RECOMMENDED ACTION #11a:
 Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

- Clean source of peak capacity
- Located close to demand
- Reduces need for new transmission
- Not previously developed in BC

- See feedback form p. 9



PREPARE FOR POTENTIALLY GREATER DEMAND

FOR GENERATIONS

Peak Capacity Resource Options

.....
RECOMMENDED ACTION #11b:

Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

.....

- *See feedback form p. 10*

- Cost effective
- Located close to demand
- Reduces need for new transmission
- Provides backup for clean intermittent resources, such as wind and run-of-river

Facilitated Discussion
on
Prepare for Potentially Greater Demand
Recommended Actions

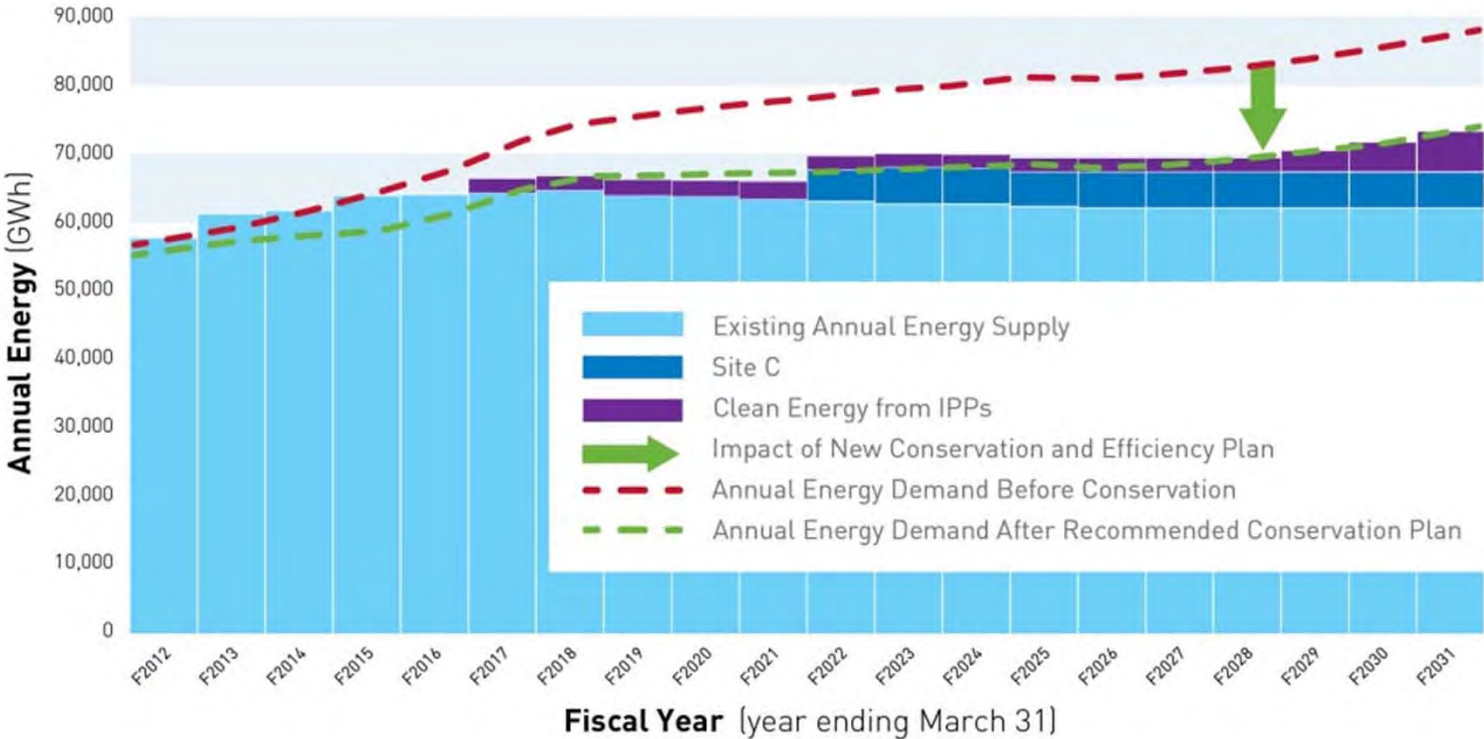
Result of Actions to Conserve, Build, Reinvest and Buy More

Kristin Hanlon

Recommended Actions to Fill Energy Gap



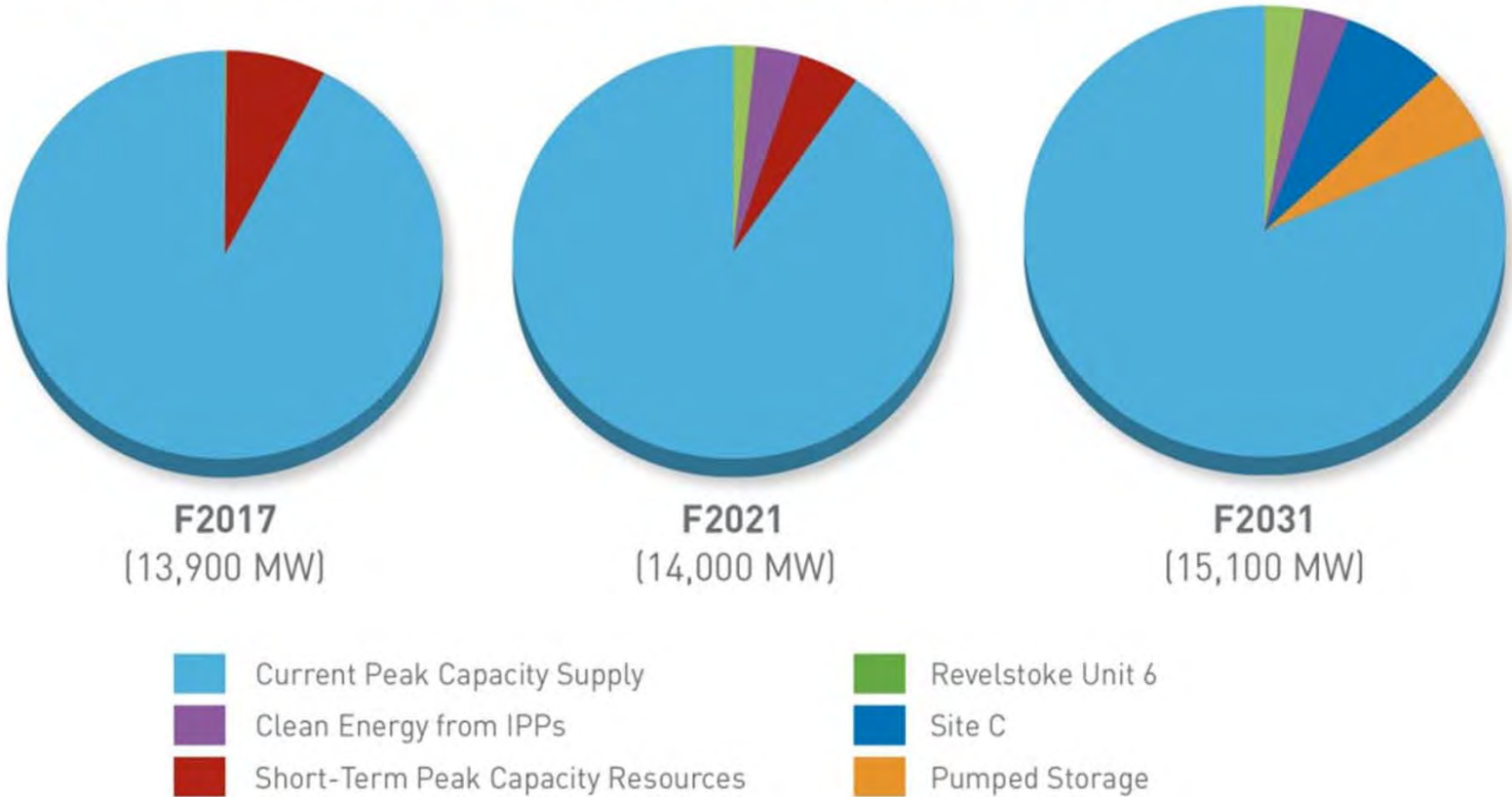
THE RECOMMENDED ACTIONS WILL FILL THE PROJECTED ANNUAL ENERGY GAP.



Recommended Actions to Fill Capacity Gap



THE RECOMMENDED ACTIONS WILL FILL THE PROJECTED PEAK CAPACITY GAP.



Next Steps

Dan George

Next Steps - Schedule



June 26th to July 13th 2012	<ul style="list-style-type: none"> • Regional Workshops for First Nations
2 weeks following workshop	<ul style="list-style-type: none"> • Meeting Summaries Sent to Participants
August 13th 2012	<ul style="list-style-type: none"> • Closing Date for Written Comment Period
Fall 2012	<ul style="list-style-type: none"> • Consultation Report Posted to Website
December 2012	<ul style="list-style-type: none"> • Integrated Resource Plan to Government for Approval

**Send your comments by August 13th 2012:
2012irp@bchydro.com or fax to 604.528.2822**



- Engage your citizens and members
- Review the information on BC Hydro's website: www.bchydro.com/irp
- We invite you to send written comments to:
 - Email: 2012irp@bchydro.com
 - Fax: 604.528.2822

Call us:

- Phone: 1.877.461.0161 ext. 3

BC Hydro is also seeking your written comments on the following question:

How would you like BC Hydro to engage you on its 5 – 10 year outlook of activities?

See Page 10 of the First Nations Feedback Form on the Draft Integrated Resource Plan

Thank You
for Your Participation

**Appendix 9 — 2011 First Nations Input Form & 2012 Feedback
Form**

First Nations Input

Integrated Resource Plan

March 2011

Name: _____

First Nation/Tribal Council: _____

BC Hydro is collecting information with this form for the purpose of its Integrated Resource Plan in accordance with BC Hydro's mandate under the *Hydro and Power Authority Act*, the BC Hydro Tariff, the *Clean Energy Act* and related Regulations and Directions. If you have any questions regarding the information collection undertaken on this form, please contact the Integrated Resource Plan First Nations Consultation Project Manager at 1.877.461.0161 extension 3.

For further information or to submit your feedback form:

BC Hydro, Aboriginal Relations & Negotiations

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2011irp@bchydro.com

www.bchydro.com/irp



FOR GENERATIONS

BC Hydro’s Electricity System

Currently BC Hydro serves 1.8 million customers in an area containing more than 94 per cent of British Columbia’s population. BC Hydro provides electricity through an interconnected network of transmission lines, distributions lines and substations. This interconnected network, or “integrated grid” connects our generating stations to one another and to our customers. In addition, BC Hydro serves some communities that are not connected to the integrated grid.

Approximately 85 per cent of British Columbia’s domestic supply comes from generation resources owned and operated by BC Hydro. The remaining 15 per cent of our customers’ electricity needs are met from power purchased from Independent Power Producers in British Columbia. The majority of B.C.’s electricity demand is located in the Lower Mainland and on Vancouver Island while the majority of the generation supply is located in remote areas of the province. This requires BC Hydro to move the electricity over long distances across rugged terrain, through a relatively small number of transmission lines. More than 93 per cent of BC Hydro’s electricity supply is from renewable resources and creates very little greenhouse gases, making it desirable at a time when the world faces climate change.

Integrated Resource Planning

The Integrated Resource Plan is BC Hydro’s long-term plan for acquiring the resources to meet customers’ needs for the next 20 years. As BC Hydro plans to meet British Columbia’s future electricity needs it must consider the following:

British Columbians’ electricity needs over the next 20 years

BC Hydro’s Electricity Load Forecast indicates demand for electricity will increase by approximately 40 per cent in the next 20 years before accounting for savings that can be achieved through conservation and efficiency. Trends that influence future electricity needs include economic growth, population growth as well as predictions on how electricity use will change as a result of changes in lifestyle, electricity rates, legislation and technology.

The “gap” between existing supply and forecasted electricity demand

BC Hydro assesses how much electricity it can produce and rely upon from its current generating facilities and existing contracts with Independent Power Producers. Even after the future increase in demand for electricity is adjusted to account for savings from BC Hydro’s current conservation and efficiency plan, an energy gap between future electricity needs and current resources still exists, particularly after 2020. The planning challenge begins with the task of how best to fill the gap.

How the gap between future electricity needs and existing resources can be closed

As we examine how to close the gap, BC Hydro considers:

- How much savings can be achieved from conservation and efficiency?
- What portfolio of electricity generation options BC Hydro should plan on?
- How much electrification will contribute to growth in electricity demand?
- What the transmission requirements will be?
- What the export market potential may be?

BC Hydro is seeking input from First Nations, stakeholders and the public on the following topics:

1. Conservation and Efficiency: Conservation – often referred to as demand side management – is BC Hydro’s first strategy for closing the gap between future electricity demands and existing resources. The latest forecasts show that demand for electricity in British Columbia will grow by approximately 40 per cent over the next 20 years.

Conservation occurs when customers change their behaviours, business operations, equipment purchases or capital investment decisions, in ways that reduce electricity use. Methods of conservation include programs, electricity rates and government regulations designed to encourage or require customers to conserve electricity. The current conservation and efficiency plan is designed to reduce the forecast growth in demand by 79 per cent by 2020. This is above the new *Clean Energy Act* target of 66 per cent. One of the important questions in the Integrated Resource Plan is whether BC Hydro should target additional savings from conservation and efficiency over and above our current significant plan.

From a planning perspective, it is difficult to guarantee a particular volume of conservation over time as it is dependent upon customer response. Depending on what combination of conservation and efficiency measures are undertaken, BC Hydro can target different levels of savings. For this Integrated Resource Plan BC Hydro is evaluating a range of options that could provide savings of between 66 per cent and 83 per cent of the gap between current capacity and anticipated demand for electricity.

2. Electricity Generation Options: While British Columbians are doing more than ever to conserve electricity, electricity use is expected to continue to increase over the coming decades. BC Hydro will develop and analyze various combinations of resource options (portfolios) that may be used to meet future electricity needs and clean energy objectives. Each portfolio is described in terms of the resources it would contain.

Electricity generation options under consideration include a combination of BC Hydro projects, such as the Site C Clean Energy Project on the Peace River, as well as electricity purchases from potential projects representing a range of resource types including: biomass, wind, run-of-river and natural gas.

3. Electrification: Electrification describes the process of switching from other fuel sources to electricity; for example, switching vehicles from petroleum to electricity. Efficient electrification is one way of supporting the province’s greenhouse gas emission reduction targets. The transportation sector is the largest source of greenhouse gas emissions in B.C., and replacing vehicles that use gasoline and diesel with electric vehicles could be one of the most significant long-term actions British Columbians could take to reduce emissions.

BC Hydro currently does not encourage fuel switching; rather it responds to the fuel switching that occurs. As part of the Integrated Resource Plan, BC Hydro is considering how it needs to respond to forecast growth in electricity demand from electrification and what role it should play in electrification going forward.

For example, it could take a more proactive approach, working with government and other partners to promote and encourage efficient electrification to benefit customers and reduce greenhouse gas emissions.

4. Transmission: The transmission system, the essential link between electrical generators and energy consumers, is planned and designed to deliver energy efficiently and reliably. Because transmission lines require long lead times to plan and construct, the Integrated Resource Plan will assess electricity demand forecasts and the transmission options that will most effectively meet those demands over the next 30 years. When assessing future transmission requirements, planners need to consider:

- The need to maintain an optimal level of reliability for customers
- Growth in electricity demand by geographic area
- Potential location and size of new generation resources
- The need to minimize electricity losses that occur when electricity is carried over long distances, and
- The expected retirement or refurbishment of existing transmission resources

Transmission systems typically have been planned in response to generation projects and electricity demand growth that are expected to occur. In this Integrated Resource Plan BC Hydro is now looking farther into the future to anticipate potential transmission needs over a 30-year horizon. While BC Hydro is likely to use both approaches going forward, emphasis can be placed on one or the other.

5. Export Market Potential: While BC Hydro currently trades electricity when it has a short-term surplus, the *Clean Energy Act* includes the objective that the province be a net exporter of clean and renewable power. The Integrated Resource Plan will assess the export market potential, including the share of the clean energy market that British Columbia could expect to capture, and make recommendations to the provincial government about what actions, if any, are required now.

1.0 CONSERVATION AND EFFICIENCY

Greater Conservation and Efficiency

To achieve higher energy savings from conservation and efficiency than BC Hydro already targets, BC Hydro would need to rely on additional changes to federal and provincial regulations, send stronger rate signals through specially designed electricity conservation rates and expand Power Smart programs. Greater emphasis would be placed on changing province-wide market parameters, and on changing societal norms and patterns that influence electricity savings

From a planning perspective, BC Hydro must be highly confident that savings from conservation and efficiency will be achieved as and when expected – otherwise it risks falling short of meeting future energy requirements. Increasing the current aggressive target carries risk that the savings will not materialize, meaning that BC Hydro would not have the adequate supply to meet legislated self-sufficiency requirements and would need to act quickly to procure a potentially more costly supply from Independent Power Producers.

Here are some trade-offs and other factors to consider:

- This approach would require you and your neighbours to reduce your electricity consumption by adopting additional energy-efficient technologies, responding to conservation rates, and making conserving energy a focus of your daily activity
- It would require additional regulations to make energy-efficient building practices and technologies mandatory
- If higher electricity savings are not achieved, higher cost electricity may need to be acquired from other jurisdictions on the open market or from accelerated power acquisition processes in B.C.

Input on Conservation and Efficiency

We would like to understand your First Nation’s perspective on whether BC Hydro should pursue greater conservation and efficiency.

1. Considering the information provided what do you think about pursuing greater conservation & efficiency?

2. What are your First Nation’s interests that BC Hydro should consider if it were to pursue greater conservation and efficiency?

2.0 ELECTRICITY GENERATION OPTIONS

These portfolios are offered as examples to illustrate key trade-offs that arise between generation options.

Example Portfolio 1: Renewable Mix

This portfolio includes a mix of renewable resources such as wind, run-of-river and biomass from Independent Power Producers. The Site C Project is specifically excluded. Given that wind and run-of-river hydro are intermittent resources, this portfolio requires backup resources when the intermittent sources are not available. These backup resources would generally consist of additions at existing BC Hydro generating facilities, or new pumped storage facilities, or gas-fired generation. This portfolio has low greenhouse gas emissions, with a geographically widespread environmental footprint. The cost of renewable resources and the need for backup resources make this the most expensive portfolio of the three.

Here are some trade-offs and other factors to consider:

- More diverse mix of renewable resources
- More dispersed regional jobs
- Lower greenhouse gas emissions and more dispersed environmental footprint
- Requires additional back-up (capacity) resources.
- Costs more than other portfolios

Input on Example Portfolio 1

We would like to understand your First Nation’s perspective on example Portfolio 1: Renewable Mix.

1. Considering the information provided what do you think about this example Portfolio?

2. What are your First Nation’s interests that BC Hydro should consider with respect to this example portfolio?

3.0 ELECTRIFICATION

Electrification: Active Promotion by BC Hydro

With a proactive approach to electrification, BC Hydro would work with government and other partners to facilitate and encourage increased electrification where it can reduce greenhouse gas (GHG) emissions and benefits to customers. Under this approach, BC Hydro could support the early development of an electric vehicle charging infrastructure in advance of significant electric vehicle sales in B.C., thereby encouraging consumers to purchase these vehicles. BC Hydro could also introduce other programs to encourage electrification in other areas.

Here are some trade-offs and other factors to consider:

- Additional reductions in provincial greenhouse gas emissions can be achieved
- Additional electrification, over what will happen in B.C. on its own, would increase the need for electricity generation resources to be built in the province
- BC Hydro’s promotion of electrification could result in increased electricity rates for BC Hydro customers because of the additional resources needed to serve and promote the new demand

Input on Electrification

We would like to understand your First Nation’s perspective on whether BC Hydro should take a proactive approach to encouraging electrification.

1. Considering the information provided what do you think about pursuing a proactive approach to encouraging electrification?

2. What are your First Nation’s interests that BC Hydro should consider if it were to pursue a proactive approach to electrification?

4.0 TRANSMISSION PLANNING

Proactive Approach: Plan Transmission to Anticipate Future Need

This approach plans the transmission system in anticipation of future need. This planning process involves identifying and considering opportunities for developing the transmission system in the following ways:

- Building bulk transmission based on anticipated need over a 30-year time horizon rather than responding to need over a 20-year time horizon
- Building regional transmission to serve an area with significant generation resource potential rather individual generation projects under development
- Building regional transmission to serve an area with significant economic development potential (e.g. mines, natural gas) rather than responding to individual requests for service as they arise

Here are some trade-offs and other factors to consider:

- Higher short-term cost, but potentially lower long-term cost if new generation and load materialize
- Higher stranded investment risk if need does not materialize
- Increased ratepayer cost, but significant potential benefits from reduced transmission footprint, more concentrated generation footprint
- May facilitate economic development in certain regions or communities, as transmission has been planned to facilitate this

Input on Transmission Planning

We would like to understand your First Nation’s perspective on whether BC Hydro should take a proactive approach to transmission planning.

1. Considering the information provided what do you think about a proactive approach to transmission planning?

2. What are your First Nation’s interests that BC Hydro should consider if it were to pursue a proactive approach to transmission planning?

5.0 EXPORT MARKET POTENTIAL

Clean Generation for the Purpose of Export

Consistent with the *Clean Energy Act*, which requires BC Hydro to undertake an assessment of the export market demand for clean or renewable energy, the energy that would come from the aggregation of renewable energy acquired from Independent Power Producers in B.C. solely for the purpose of exporting this electricity to markets outside B.C.

Here are some trade-offs and other factors to consider:

- Additional electricity generation projects would be built by Independent Power Producers within the province
- The environmental footprint from additional clean or renewable electricity generation projects would occur in B.C. versus other jurisdictions
- Building generation resources across the province would lead to increased construction and maintenance jobs in the regions
- Rate payers are protected from bearing any negative financial consequences, as per the *Clean Energy Act*
- Economic benefits and additional revenue from this electricity generation would flow to the Province

Input on Export Market Potential

We would like to understand your First Nation’s perspective on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

1. Considering the information provided what do you think about building generation for the purpose of exporting electricity to other jurisdictions?

2. What are your First Nation’s interests that BC Hydro should consider in clean generation for the purpose of export?

ADDITIONAL COMMENTS ON THE DEVELOPMENT OF THE INTEGRATED RESOURCE PLAN

A large rectangular area with a black border, containing 25 horizontal lines for writing additional comments.

First Nations Feedback Form

Draft Integrated Resource Plan

A Plan to Meet B.C.'S Future Electricity Needs

June - July 2012

Name:

First Nation/Tribal Council:

BC Hydro is collecting information with this form for the purpose of its Integrated Resource Plan in accordance with BC Hydro's mandate under the *Hydro and Power Authority Act*, the BC Hydro Tariff, the *Clean Energy Act* and related Regulations and Directions. If you have any questions regarding the information collection undertaken on this form, please contact the Integrated Resource Plan First Nations Consultation Project Manager at 1.877.461.0161 extension 3.

For further information or to submit your feedback form:

BC Hydro, Aboriginal Relations & Negotiations

6911 Southpoint Drive

Burnaby, B.C. V3N 4X8

Phone: 1.877.461.0161 extension 3

Fax: 604.528.2822

2012irp@bchydro.com

www.bchydro.com/irp



FOR GENERATIONS

Integrated Resource Planning

Today, BC Hydro is one of the largest electricity utilities in Canada and serves 1.8 million customers – 95% of B.C.'s population. The electricity that heats our homes, lights our streets and powers our industries is generated in many regions of the province and delivered over thousands of kilometers of transmission and distribution lines. Therefore it is no surprise that the electricity systems required are inherently complex and capital intensive, and generally take significant lead time to construct. It can take five to six years to plan and build a new generation facility and even longer to develop transmission lines and infrastructure. So, BC Hydro must plan carefully to determine the least-cost options and keep rates affordable, to encourage conservation, and to acquire the right mix of generation and transmission resources to meet its customers' needs.

BC Hydro forecasts that the demand for power will increase by about 50 per cent over the next 20 years. The draft Integrated Resource Plan (IRP) describes the actions that BC Hydro proposes to take over the next 10 years to ensure British Columbians continue to receive low-cost, reliable electricity over the long term, whilst adhering to the guidelines set by the B.C. *Clean Energy Act*. The draft Plan includes consideration of the most recent changes in electricity demand forecast and reflects input gathered in 2011 from First Nations, stakeholder and public consultation. Once again, we are interested in seeking feedback on major aspects of the draft Plan.

As part of this process, BC Hydro asks three questions:

1. How much electricity will British Columbians need over the next 20 years?
2. What is the gap between existing supply and forecast demand?
3. How can BC Hydro close the electricity gap?

Within the Consultation Discussion Guide which you have received, BC Hydro recommends a set of actions to address these three questions. This includes: **Conserving More, Building and Reinvesting More and Buying More**. In addition, BC Hydro must look to develop contingency plans to address the "what ifs", such as what if demand grows more quickly than expected. Therefore BC Hydro also has additional recommendations to **Prepare for Potentially Greater Demand**.

When preparing the final IRP, BC Hydro will consider feedback received through consultation along with technical, financial, environmental and economic development inputs. The plan will be submitted to the provincial government by December 2012, after which government will review the plan and decide whether to approve it.

Feedback from First Nations on the draft Integrated Resource Plan is extremely important, therefore please use the form provided to send us feedback on some or all of what you have read within the Consultation Discussion Guide. Return instructions can be found on the front page and please note that the deadline for providing feedback is **AUGUST 13, 2012**.

➤ **CONSERVE MORE — REDUCE ENERGY CONSUMPTION**

1. BC Hydro recommends conserving more by:

- a. Increasing our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

- b. Exploring more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **CONSERVE MORE — ENCOURAGE LESS CONSUMPTION DURING PEAK DEMANDS**

2. BC Hydro recommends pursuing voluntary conservation programs that encourage residential, commercial, and industrial customers to reduce energy consumption during peak periods

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

DRAFT

➤ **BUILD AND REINVEST MORE – BUILD THE SITE C CLEAN ENERGY PROJECT**

3. BC Hydro recommends building Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown’s duty to consult and, where appropriate, accommodate Aboriginal groups.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **BUILD AND REINVEST MORE – TAKE ADVANTAGE OF RESOURCE SMART OPPORTUNITIES**

4. BC Hydro recommends beginning to work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

5. BC Hydro recommends continuing to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro’s existing hydroelectric system.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **BUILD AND REINVEST MORE – COMBINE READILY AVAILABLE RESOURCES TO MEET THE SHORT-TERM CAPACITY GAP**

6. BC Hydro recommends filling the short-term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **BUILD AND REINVEST MORE – REINFORCE TRANSMISSION**

7. BC Hydro is recommending reinforcing the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **BUY MORE – ENERGY FROM B.C.-BASED CLEAN ENERGY PRODUCERS**

8. BC Hydro recommends developing energy procurement options to acquire up to 2,000 gigawatt hours from clean energy producers for projects that would come into service in the 2016-2018 time period.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **PREPARE FOR POTENTIALLY GREATER DEMAND – POTENTIAL ADDITIONAL LARGE INDUSTRIAL DEMAND**

9. BC Hydro recommends continuing to work with Liquefied Natural Gas (LNG) developers to understand their electricity requirements and keep options open until further certainty on future requirements can be established. Specifically:

- a. Undertake work to maintain the earliest in-service date for a new 500-kV transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

- b. Develop procurement options for additional clean energy resources, back up by gas fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019-2020 timeframe, should it be needed.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:



➤ **PREPARE FOR POTENTIALLY GREATER DEMAND – POTENTIAL ADDITIONAL LARGE INDUSTRIAL DEMAND**

10. BC Hydro recommends continuing to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

➤ **PREPARE FOR POTENTIALLY GREATER DEMAND – PEAK CAPACITY RESOURCES**

11. a) BC Hydro recommends working with industry to explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

11. b) BC Hydro recommends working with industry to explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

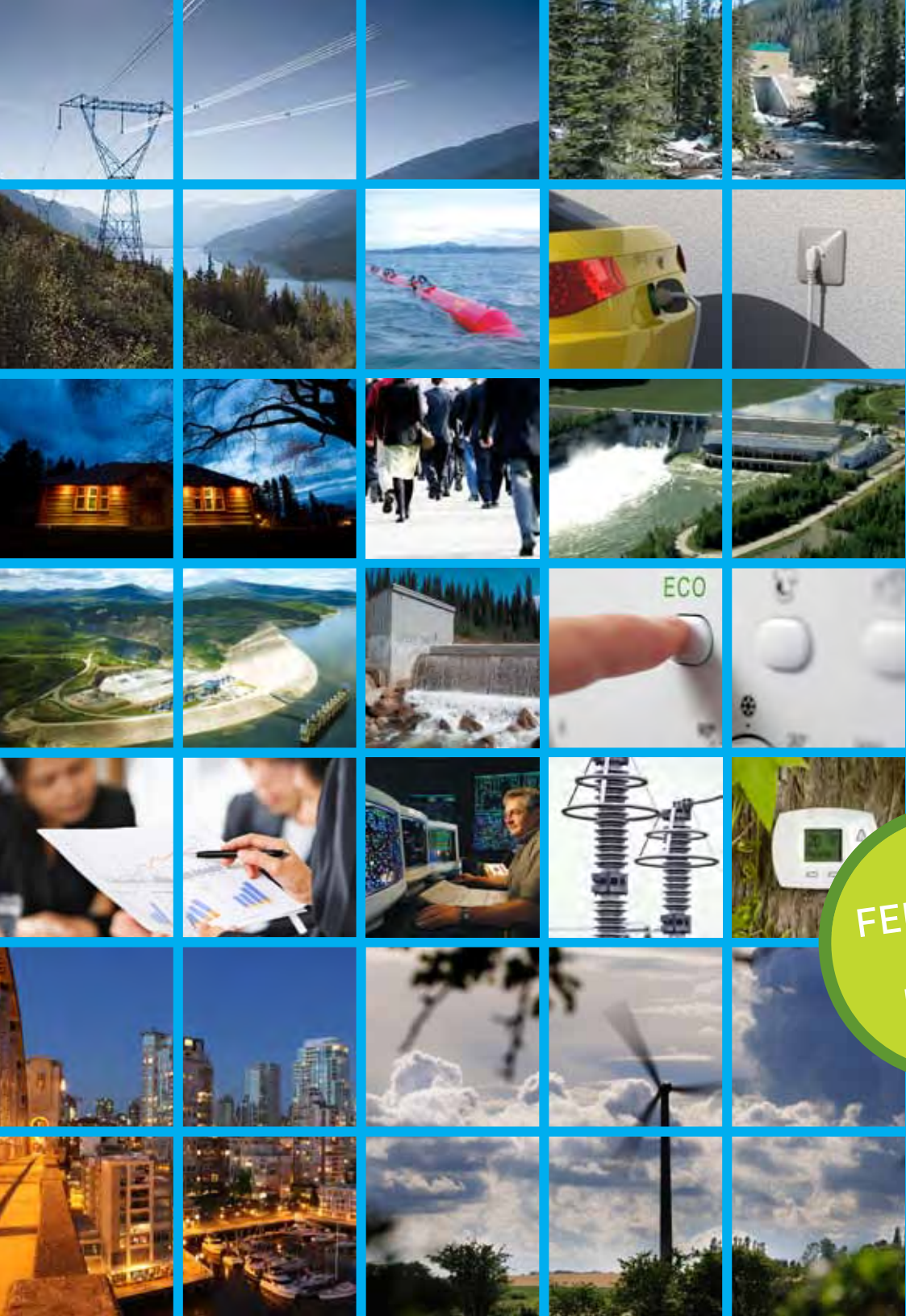
Strongly Agree	Somewhat Agree	Neither Agree Or Disagree	Somewhat Disagree	Strongly Disagree

Please indicate the reasons for your level of agreement:

Additional Comments:

**BC Hydro is also seeking your comments on the following question:
How would like us to engage you on BC Hydro’s 5 – 10 year outlook of activities?**

**Appendix 10 — 2011 Consultation Workbook & 2012 Discussion
Guide**



2011 INTEGRATED RESOURCE PLAN

PLANNING FOR A CLEAN ENERGY FUTURE CONSULTATION WORKBOOK

MARCH 1 – APRIL 30, 2011



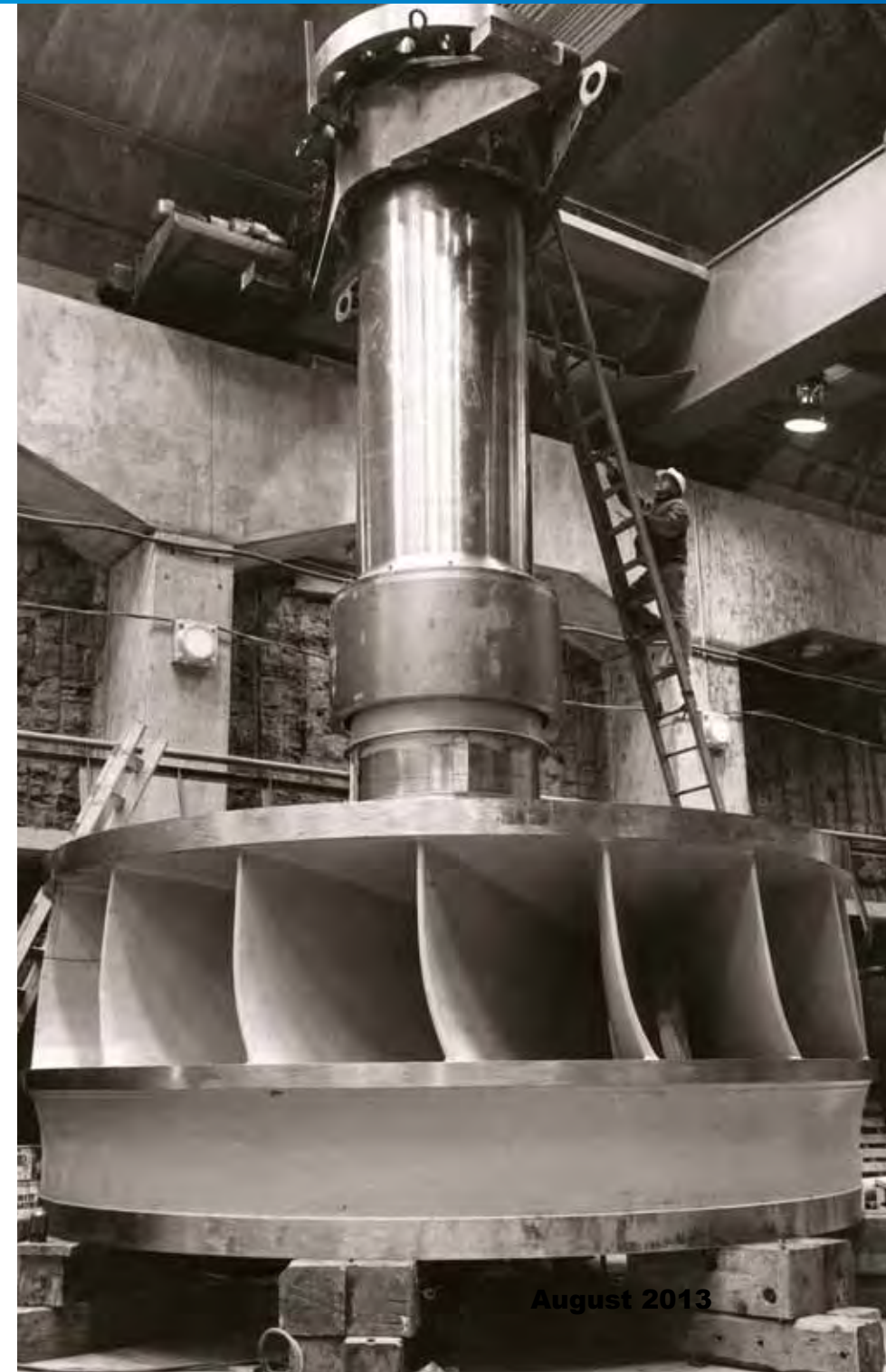
BC HYDRO OVERVIEW

Fifty years ago, BC Hydro was created as a Crown corporation to deliver electricity to homes and businesses throughout much of the province. Investments in dams, generating stations, transmission and distribution networks, and programs to encourage conservation have provided a reliable supply of electricity for generations of British Columbians at some of the lowest rates in North America.

Currently, BC Hydro serves 1.8 million customers in an area containing more than 94 per cent of British Columbia's population. The third-largest electric utility in Canada, BC Hydro provides electricity to its customers through an integrated grid. BC Hydro generates the majority of its power from large hydroelectric stations on the Columbia and Peace rivers. The remainder of its domestic electricity supply comes from smaller BC Hydro-owned generating stations and purchases from Independent Power Producers (IPPs).

In years when domestic requirements have exceeded domestic supply, BC Hydro has also imported some of its total net annual supply from other jurisdictions. Facing a growing population with an increasing appetite for electricity-driven technology and signs of new growth in the energy-intensive industrial sector, BC Hydro is forecasting that demand for power will increase by approximately 40 per cent over the next 20 years, before accounting for savings that can be achieved through promoting energy efficiency and conservation.

On its 50th anniversary, BC Hydro is looking back on its legacy in helping to develop the province, and it is examining the challenges that await British Columbians in the next 50 years. To ensure that future generations will continue to enjoy the competitive advantage of clean, reliable power, BC Hydro must plan ahead to upgrade and expand its heritage facilities, secure new supplies of renewable energy, build new transmission and distribution lines, encourage conservation, and integrate new technologies to modernize the system.



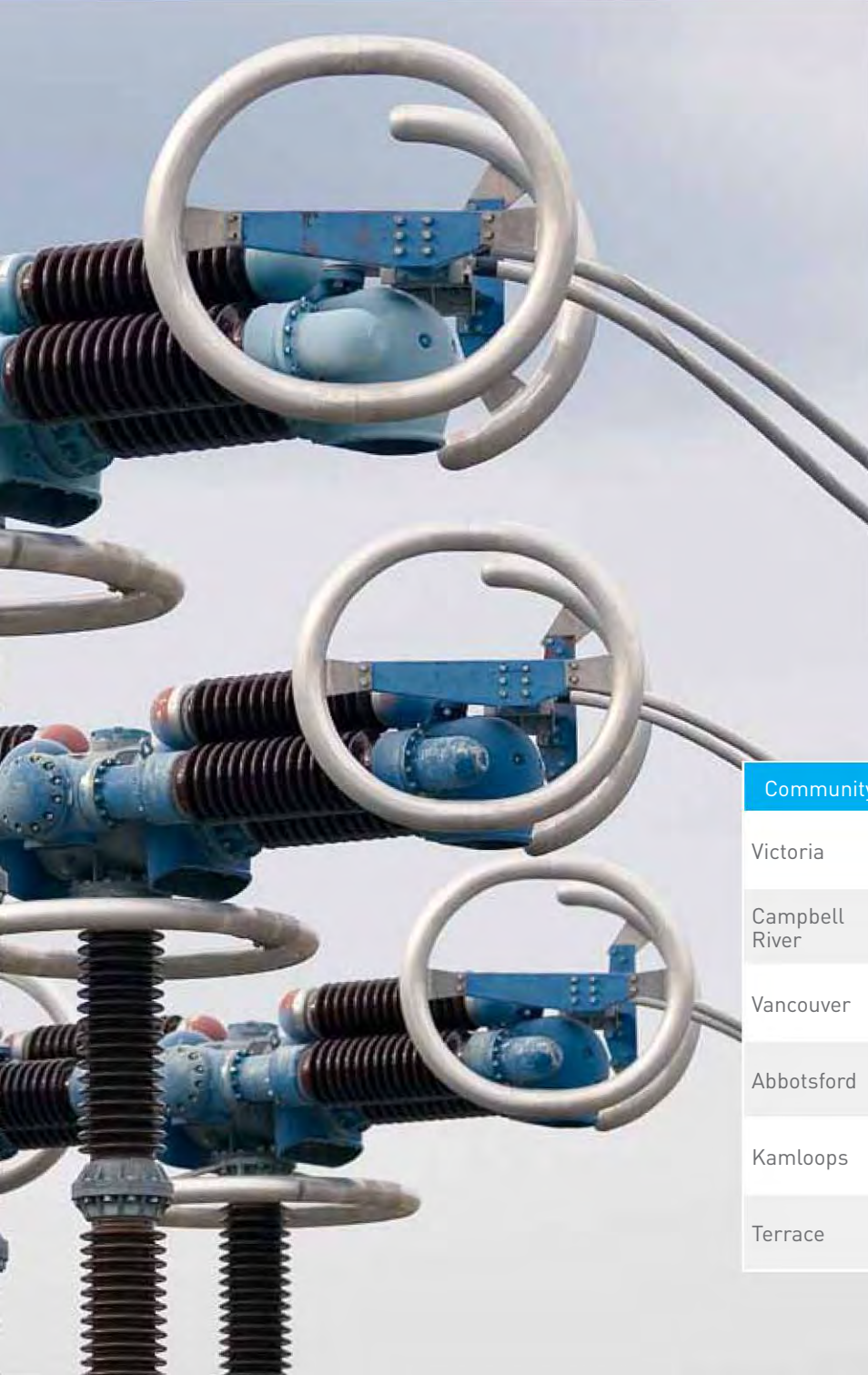


TABLE OF CONTENTS

- 1. INTRODUCTION 2
- 2. INTEGRATED RESOURCE PLANNING 3
- 3. IDENTIFYING AND ASSESSING FUTURE NEEDS 7
- 4. PUBLIC, STAKEHOLDER & FIRST NATIONS CONSULTATION PROGRAM. 10
- 5. CONSULTATION TOPICS 11
- 6. FEEDBACK FORM. 27
- 7. GLOSSARY 37

BC Hydro wants to hear from British Columbians as it develops its Integrated Resource Plan. To add your voice, attend a [public open house](#) in a community near you.

Community	Date	Time	Location
Victoria	Wednesday, March 9	6:00 – 9:00 p.m.	Hotel Grand Pacific
Campbell River	Thursday, March 10	6:00 – 9:00 p.m.	Coast Discovery Inn & Marina
Vancouver	Tuesday, March 15	6:00 – 9:00 p.m.	Simon Fraser University Harbour Centre
Abbotsford	Wednesday, March 16	6:00 – 9:00 p.m.	Clearbrook Community Centre
Kamloops	Thursday, March 17	6:00 – 9:00 p.m.	Ramada Kamloops
Terrace	Tuesday, March 22	6:00 – 9:00 p.m.	Terrace Sportsplex

Community	Date	Time	Location
Prince George	Wednesday, March 23	6:00 – 9:00 p.m.	Ramada Prince George
Fort St. John	Thursday, March 24	6:00 – 9:00 p.m.	Quality Inn Northern Grand
Vernon	Tuesday, March 29	6:00 – 9:00 p.m.	Best Western Vernon Lodge
Castlegar	Wednesday, March 30	6:00 – 9:00 p.m.	Castlegar & District Community Complex
Fort Nelson	Thursday, March 31	6:00 – 9:00 p.m.	Woodlands Inn
Cranbrook	Thursday, April 7	6:00 – 9:00 p.m.	Prestige Rocky Mountain Resort and Convention Centre

POWER FOR OUR HOMES AND WORKPLACES

It can seem like a bit of magic: you flick a switch and whatever gadget or appliance you choose jumps to life. You get heat, you get light. You get music or entertainment. All this electrical “fuel” arrives at our homes or workplaces safely, silently and consistently. It leaves no smell, and there is never any left over when you finish. You just turn it off and it stops. It all seems so simple.

Of course, it’s not. The electricity that powers our lives comes in the form of a strictly controlled current of electrons. Most of the actual electricity is generated in the far corners of the province and carried over thousands of kilometres of transmission and distribution lines to reach the bulk of us who live in the province’s southwest corner. Along the way, it passes through a range of landscapes, habitats and communities before it arrives at our homes and places of business.

The tricky part is that electricity doesn’t actually “go away” when you turn off the switch. Once generated, it has to be used or it can overload and crash the system. Accordingly, BC Hydro must anticipate how much people will want at any given time of the day or year and introduce exactly that amount into the network. BC Hydro continually monitors the entire system to ensure that they estimated correctly or to adjust the flow accordingly.

Over the longer term, BC Hydro must also anticipate future demand. It can take five to seven years to build a new generation facility and even longer to build transmission, so BC Hydro must plan carefully – and well into the future – to ensure that it has encouraged conservation and acquired the right mix of generation and transmission resources to meet its customers’ needs.

Whether it’s our homes, communities, businesses or industries, we depend on affordable, reliable electricity when and where we need it. It’s essential that BC Hydro understands customers’ needs and meets the demand for electricity now and for years to come. It’s also essential that we consider the consequences of our decisions from a broad range of perspectives – for example, on our pocketbooks, on our economy, and on the people and the environment where our electricity is generated and transmitted.



373 of 759

THE INTEGRATED RESOURCE PLAN

The Integrated Resource Plan – the IRP – is BC Hydro’s long-term plan for acquiring the resources to meet customers’ needs for the next 20 years. It is guided by the government of British Columbia’s new *Clean Energy Act*, which came into effect in June 2010 and sets specific new energy objectives for BC Hydro with respect to its long-term electricity plan (see page 8). Notably, long-term electricity planning is not a once-every-20-years exercise. Over the course of its history, BC Hydro has renewed its long-term plan at regular intervals. Most recently, it developed an Integrated Electricity Plan in 2006 and a Long-Term Acquisition Plan in 2008. Once developed, BC Hydro will renew the Integrated Resource Plan periodically.

Integrated electricity systems are inherently complex and capital-intensive, and most new resources require significant lead times to develop. As a result, electric utilities must plan ahead to be sure that the required resources will be in place when needed. And implementation of long-term electricity plans require a staged and flexible approach to account for changes in everything from the economy to technology.

Notably, BC Hydro’s IRP does not, by itself, lock the utility into any of the specific projects identified over the planning horizon. Rather, the plan, if approved by government, will set out a path for BC Hydro and will require key actions to be taken over the next few years that will ensure customers’ needs can be met over the next 10 and 20 years. Any specific project that is later developed in response to the IRP – whether a transmission line, a generation project, a power call or a conservation plan – will have its own individual design, consultation, permitting and approval process.

August 2013

As BC Hydro considers how to meet B.C.'s electricity needs over the next 20 years, it asks three basic electricity planning questions:

- 1. How much electricity will British Columbians need over the next 20 years?** This depends on a host of issues, some that may increase demand on the system, and some that may reduce demand. The demand must also be understood in two ways: how much energy will be required on an annual basis, and how much energy might be needed at any given point in time to meet peak demand and to ensure that we can “keep the lights on”, even on the coldest days in winter.
- 2. What is the gap between existing supply and forecast electricity demand?** What electricity generation and transmission assets does BC Hydro currently have that can continue to be relied upon going forward, and how much electricity can it source from its existing contracts with B.C.-based Independent Power Producers?

As well, to what degree can current conservation and efficiency measures such as conservation rates be relied upon to reduce demand?

- 3. How can BC Hydro close the gap?** What blend of additional conservation measures and generation and transmission resources will be needed to meet demand, reliably and cost-effectively?

As BC Hydro examines how to close the gap, it considers:

- How much savings can be achieved from conservation and efficiency
- What portfolio of electricity generation options it should plan on
- How much electrification will contribute to growth in electricity demand
- What the transmission requirements will be
- What the export market potential may be



374 of 759

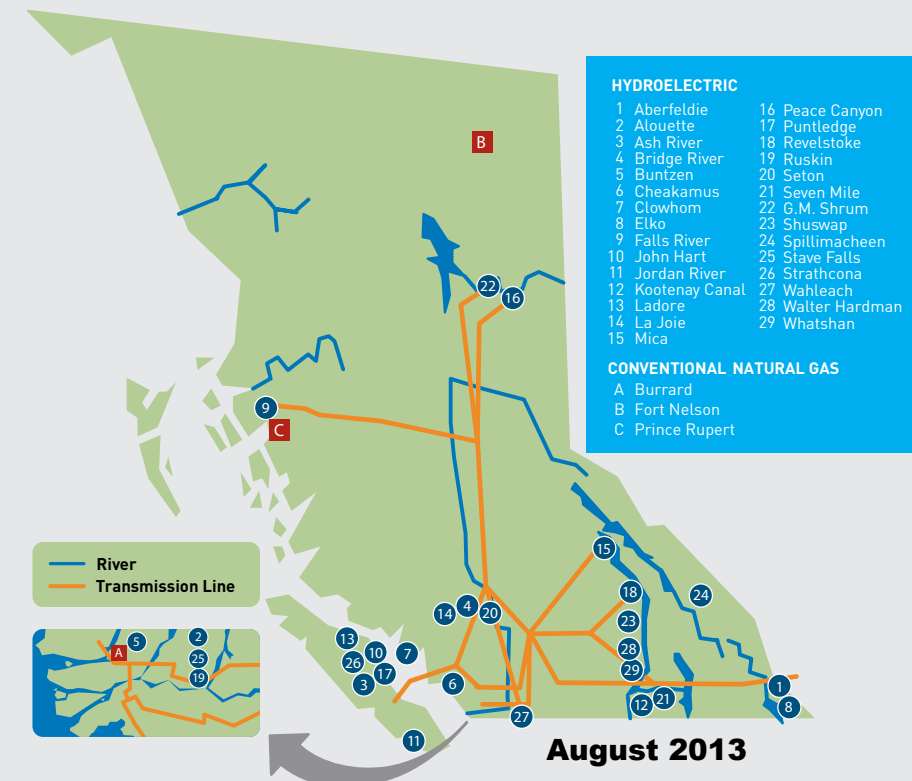
CLEAN ENERGY SUPPLY AND TRANSMISSION

The majority of B.C.'s electricity demand is located in the Lower Mainland and on Vancouver Island, while the overwhelming majority of supply is remote and must be moved over very long distances across rugged terrain and through a relatively small number of transmission lines.

More than 93 per cent of BC Hydro's electricity supply is renewable, and creates little or no greenhouse gas emissions, making it desirable at a time when the world faces climate change. BC Hydro's energy supply comes from a combination of its own heritage resources (see below) and power purchases from Independent Power Producers who generate their energy from a range of sources, including hydro, biomass and wind.

BC Hydro is regulated by the BC Utilities Commission and governed by the *BC Hydro and Power Authority Act*, the *Utilities Commission Act* and the *B.C. Clean Energy Act*. Collectively, this legislation ensures that BC Hydro will continue to provide clean, reliable and cost-effective electricity to its customers.

BC HYDRO GENERATION



HOW MUCH ELECTRICITY WILL BRITISH COLUMBIANS NEED OVER THE NEXT 20 YEARS?

BC HYDRO'S ELECTRICITY LOAD FORECAST

The annual long-term load forecast provides planners with an understanding of how much electricity will be required 10 and 20 years from now. Trends that influence future electricity needs include economic growth and population growth, as well as predictions on how electricity use will change as a result of changes in lifestyle, electricity rates, legislation and technology.

The 2010 Electricity Load Forecast indicates that demand will increase by approximately 40 per cent in the next 20 years before accounting for savings that can be achieved through conservation and efficiency.

The demand forecast is developed by examining BC Hydro's three customer classes: residential, commercial and industrial. The primary drivers for future increased electricity consumption among residential customers include population growth and housing starts. Drivers for the commercial sector are general economic activity, which includes gross domestic product (GDP) and retail sales, and employment. The industrial sector's demand is the most volatile year over year, and it is the most challenging to forecast, as it is sensitive to the unpredictability of international commodity prices, economic cycles, natural disasters (e.g., mountain pine beetle), regulatory approvals and labour disputes.

WHAT AFFECTS LOAD GROWTH?

Population – The B.C. population is expected to grow to nearly 5.8 million people over the next 20 years, an increase of almost 25 per cent over the current population of 4.6 million.

Conservation – Programs, such as BC Hydro's award-winning Power Smart, have been effective in helping people use electricity more efficiently and reduce the amount of energy they use, through everything from turning out the lights, to turning down the heat, to improving home insulation.

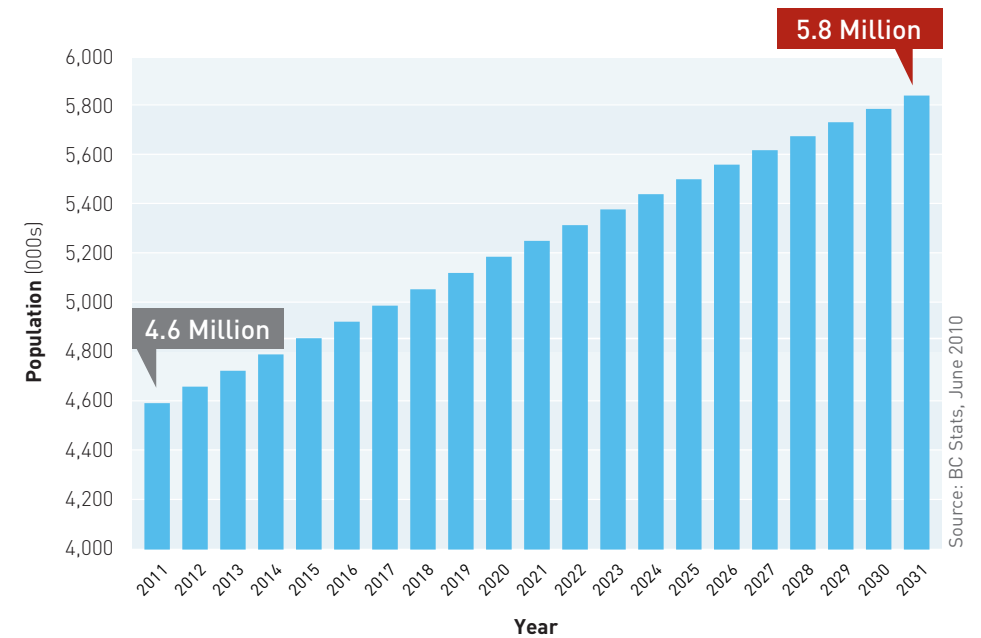
Consumption – The increased popularity of computers, larger televisions and other consumer products has greatly increased the demand for electricity in individual homes.

Efficiency – Manufacturers are consistently producing conventional goods (washers, dryers, refrigerators, compact fluorescent light bulbs) that use much less electricity.

Electrification – The rising price, environmental impact and threatened shortage of fossil fuels may drive people to choose electricity to power everything from home heating to automobiles.

Economic Activity – The current forecasted expansion in the mining and the oil and gas industry has the potential to significantly increase electricity use in B.C.

B.C.'S PROJECTED POPULATION GROWTH 2011 – 2031



August 2013

WHAT IS THE GAP?

A LOOK AT EXISTING RESOURCES COMPARED TO FORECAST DEMAND

Before BC Hydro can assess the future gap between supply and demand, it first must assess how much electricity it can produce and rely upon from its current generating facilities, its existing contracts with Independent Power Producers and its current conservation plan.

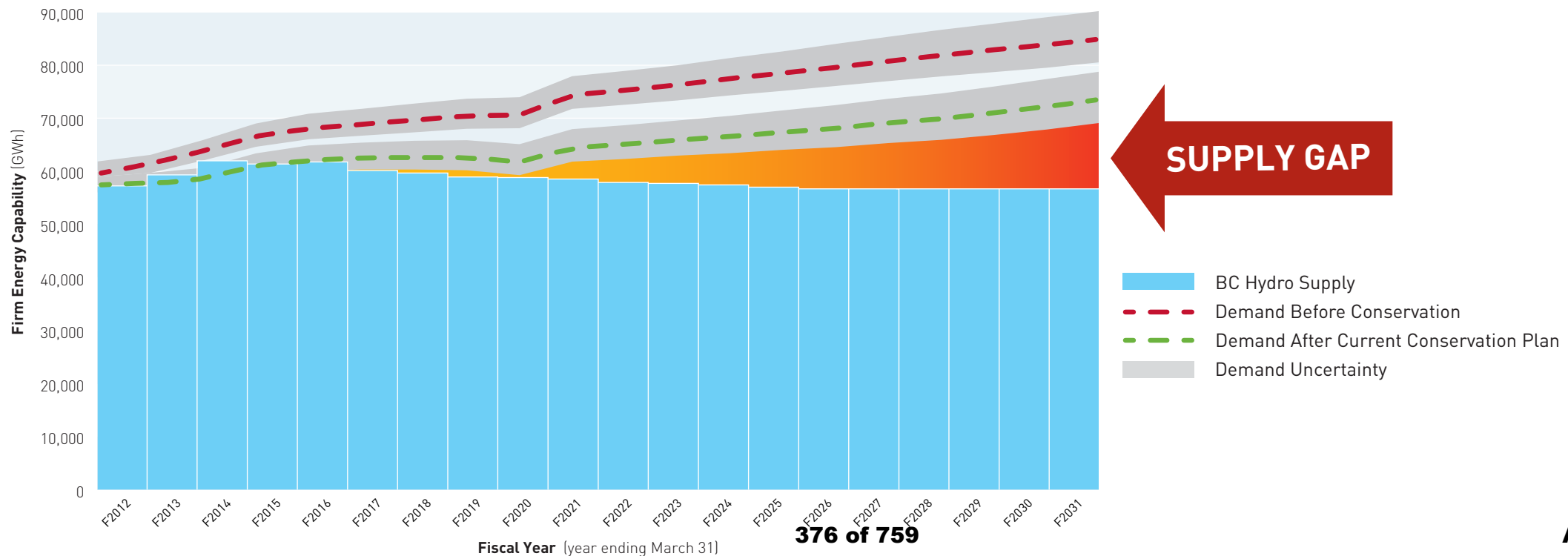
Approximately 85 per cent of domestic supply comes from generation resources owned and operated by BC Hydro; the remaining 15 per cent of electricity need is met with power purchased from Independent Power Producers in B.C.

Of the electricity produced by BC Hydro, almost 80 per cent comes from its large hydroelectric installations in the Peace and Columbia river basins.

BC Hydro currently has more than 100 electricity-purchase agreements with Independent Power Producers, some of which date back to the 1980s. Sixty-five of these purchase agreements involve projects that have reached commercial operation. While the majority of these projects generate electricity from run-of-river hydro plants, there are also a number of wind and biomass generating plants. In wind alone, BC Hydro has purchase agreements with Independent Power Producers that represent a total of 700 megawatts (MW), of which 100 MW has reached commercial operation as of January 2011.

As the “gap” diagram below illustrates, even after the increase in demand for electricity is adjusted to account for savings from BC Hydro’s current conservation and efficiency plan, an energy gap between future electricity needs and current resources still exists, particularly after 2020. The planning challenge begins with the task of how best to fill the gap.

ENERGY DEMAND/SUPPLY BALANCE FORECAST



HOW CAN THE GAP BETWEEN FUTURE ELECTRICITY NEEDS AND EXISTING RESOURCES BE CLOSED?

FUTURE RESOURCE OPTIONS

After identifying the gap between forecasted demand and current supply, planners look at possible new sources of electricity, or resource options. These include additional conservation and efficiency measures, supply-side options such as new generating resources (supplied by BC Hydro or Independent Power Producers), and the necessary transmission options to ensure that the energy from these resources can be optimally brought to customers.

BC Hydro periodically updates its inventory of potential future resources, most recently in the *2010 Resource Options Report*.

ADDITIONAL ELECTRICITY CONSERVATION AND EFFICIENCY

Encouraging electricity conservation and efficiency is called demand-side management (DSM). This can be voluntary, as when BC Hydro encourages its residential, commercial and industrial customers to use less electricity by, for example, adopting efficient technology options such as ENERGY STAR® windows, or it can be regulated, as when governments pass regulations that, by similar example, mandate low-emissivity windows. BC Hydro can also design electricity rates that encourage conservation, for example, by charging more for power at certain times of the day in an attempt to shift the time of use and lower the peak demand. There is potentially more to gain from

conservation (a reduction of up to 79 per cent under the current plan) than what is mandated under the *Clean Energy Act*.

Power Smart is BC Hydro's branded program encompassing all of its demand-side management programs. Power Smart uses a wide range of approaches, including information programs, incentives specific to particular enterprises or homes, and rebate programs to assist customers in paying for conservation or efficiency measures.

Overall, demand-side management helps to keep rates low, as saving electricity is lower in cost than new generation.

GENERATION AND TRANSMISSION OPTIONS

For an overview of generation options and their potential implications, see the table on pages 14–15. For a discussion on approaches to transmission planning, see pages 22–24.

ENERGY, CAPACITY AND CUSTOMER DEMAND

Electricity consumption varies by customer type, by day, and by year. Some customers, such as large industries, need a steady amount of electricity delivered. Others consume in short bursts. Residential customers, for example, draw most of their energy in the early evening when they are preparing dinner, using appliances and watching TV. Over the whole year, demand is highest in November, December and January, when people use more electricity for heat and light.

To meet the demand for electricity, a utility must have:

- **Firm Energy** – refers to electricity that is available at all times. Resources typically providing firm energy include large hydroelectric dams, bioenergy, geothermal and natural gas.
- **Dependable Capacity** – the maximum amount of electricity that all of the generating stations combined can reliably produce in any one instant, usually measured in megawatts (MW)
- **Adequate Generation Reserve** – sufficient additional capacity to cover forecast uncertainties, unscheduled outages, and system fluctuations



August 2013

WHICH BLEND OF FUTURE RESOURCES WILL BEST MEET ELECTRICITY NEEDS?

To effectively compare resource portfolios (bundles of different resource options), BC Hydro uses characteristics to evaluate at a high level the reliability, cost, economic development and environmental implications of different portfolios. Characteristics include:

- **Technical:** How much dependable capacity can it provide? In the case of conservation, how much energy or capacity savings can it offer?
- **Financial:** What are the estimated costs of the resource options? The costs associated with developing additional generation facilities, including building new roads and transmission lines or undertaking more conservation, ultimately affect the cost of electricity to consumers.
- **Economic Development:** What are the characteristics of different resource options to support economic development? For example, employment and gross domestic product impacts.
- **Environmental:** What are the environmental characteristics of the different resource options? For example, what is their greenhouse gas emissions profile?

The characteristics listed above are appropriate for comparing a wide range of resource options across a range of environments located throughout the province.

COMPARING ALTERNATIVE PORTFOLIOS

There are many combinations of resource options that could be used to fill the gap between future demand and the current supply. These combinations, or bundles, are described as “portfolios”. It is important to look at resources in combination, because the limitations of some resources can be balanced by the strengths of others. For example, some resources are intermittent and must be backed up by a dependable supply of power. As well, the sequence or timing of acquiring or developing new resources is important to ensure that supply is available, to avoid unnecessary costs, and to ensure reliable power.

Later on in this workbook, we examine several portfolios for the purpose of seeking input on the draft plan. Planners examine the performance of many portfolios to understand the consequences of different mixes of resource options.

Risk management also is a central focus in resource planning. A robust portfolio consists of electricity resources that will ensure that customer needs are met cost-effectively, reliably and at low risk.

INDEPENDENT POWER PRODUCERS

Since the 1980s, Independent Power Producers (IPPs) have been helping BC Hydro meet its customers’ electricity demand. Currently, IPPs provide BC Hydro with approximately 12,000 GWh/year of electricity, equal to about 15 per cent of BC Hydro’s total supply. IPPs include independent power companies, municipalities, First Nations and customers, working alone or in partnership.

BC Hydro has 100 electricity purchase agreements with IPPs, 65 of which have reached commercial operation. Electricity comes from a range of sources including wind, run-of-river hydro, and biomass.

BENEFITS OF IPP POWER

IPPs identify, design and build innovative clean renewable power projects that help BC Hydro meet customers’ electricity needs and achieve electricity self-sufficiency at competitive prices. Through the development and operation of their projects, IPPs are responsible for securing all necessary regulatory approvals and permits. IPPs take on the financial, development, construction and operating risk associated with their projects while delivering electricity at secured prices over the life of the contract with BC Hydro.



WHAT IS THE PLANNING CONTEXT?

BC Hydro's electricity plans and planning processes are shaped by government legislation and policies, by changing market structures and conditions, and by new developments in technologies.

On June 3, 2010, the government of British Columbia passed the *Clean Energy Act*, legislation that changes the approach that BC Hydro must take to planning. The Act reaffirms the requirement that BC Hydro must achieve electricity self-sufficiency by 2016 and each year after.

The *Clean Energy Act* also sets out several new or updated objectives, including:

- Generate at least 93 per cent of all electricity in British Columbia from clean or renewable sources and build the infrastructure necessary to transmit that electricity
- Use renewable power potential to help achieve the provincial government's greenhouse gas (GHG) reduction targets
- Meet at least 66 per cent of any increase in demand through conservation and efficiency
- Include an assessment of anticipated transmission requirements over the next 30 years as part of the Integrated Resource Plan
- Encourage economic development
- Explore and pursue, subject to Cabinet approval, the opportunity to develop and sell clean energy into the interprovincial and international markets
- Foster the development of First Nations and rural communities through the use and development of clean and renewable resources



PROVINCIAL GREENHOUSE GAS TARGETS

The government of British Columbia has ambitious targets for reducing greenhouse gas emissions. Having always delivered most of its power from hydroelectric sources, BC Hydro has one of the smallest "carbon footprints" of any major utility in Canada or the U.S. It is BC Hydro's intention – and responsibility under the provincial *Clean Energy Act* – to maintain and improve upon that position by concentrating on development in clean, renewable sources of energy while maintaining reliability and low cost. B.C.'s low-carbon electricity can play a key role in reducing emissions by offering customers a low-emission alternative to fossil fuels for vehicles, homes, businesses and industry.



WHAT'S IN THE PLAN?

The Integrated Resource Plan will provide an analysis and outlook that can guide BC Hydro operations for two decades and beyond. It will include:

- A 20-year Base Resource Plan that sets out a mix of demand reduction and generation and transmission options that are able to fulfill the forecasted demand
- Contingency Resource Plans that address the uncertainties inherent in long-term planning, such as higher than expected demand. Contingency resource plans put forth a range of alternate resource options that would be relied upon if conditions change significantly.
- A 30-year transmission plan

These plans will include addressing key questions, such as:

- How much further can demand be reduced by conservation?
- How can the Site C Project help meet future demand?
- When should the next call for power from Independent Power Producers be made? Should it include natural gas?
- What are the transmission requirements?
- How does BC Hydro balance competing policy objectives?

The IRP will also include a consideration of:

- The potential to use electrification to reduce greenhouse gas emissions in B.C.
- The opportunity to develop revenue-earning clean energy exports, and the potential associated costs of building capacity to serve such a market

The planning process includes consultation with the public, First Nations and other stakeholders. An account of those consultations and a thorough review of stakeholder feedback will form part of the final Integrated Resource Plan when it is submitted for government consideration by early December 2011.



380 of 759



August 2013

PUBLIC, STAKEHOLDER & FIRST NATIONS CONSULTATION PROGRAM

BC Hydro will consult with First Nations, stakeholders and the public as it develops an Integrated Resource Plan that responds to its service obligations, B.C.’s energy objectives and its obligations as set out in the *Clean Energy Act*. The process for developing the Integrated Resource Plan includes three phases:

TECHNICAL REVIEW AND FOUNDATION FOR INTEGRATED RESOURCE PLANNING (FALL 2010)

In the first phase of developing the IRP, BC Hydro focused on assembling key pieces of technical data necessary to construct a plan, and sought input from selected First Nations and stakeholders with regard to the design of the consultation process. BC Hydro also worked with its Electricity Conservation and Efficiency Advisory Committee as it constructed conservation plan options for energy conservation. During this phase, BC Hydro also updated its forecast of future electricity demand to establish the “gap” between future demand and existing and committed energy resources.

An IRP Technical Advisory Committee was established that will assist BC Hydro in creating a plan through detailed technical advisory input and feedback. This advisory input is in addition to input provided by the public, First Nations and stakeholders through the province-wide consultation process.

CONSIDERING OUR CLEAN ENERGY FUTURE – ASSESSING AND EVALUATING OPTIONS (WINTER/SPRING 2011)

In the second phase of developing the IRP, BC Hydro is using the technical data prepared in the fall to compare alternative ways of meeting growing demand and associated clean energy objectives. BC Hydro is asking the public, First Nations and stakeholders to consider relevant topics being addressed in the IRP. These topics include the approach to conservation and efficiency, electricity generation options, electrification, approaches to planning transmission, and export market potential. As part of this phase, and considering resource alternatives, BC Hydro is examining the Site C Clean Energy Project, a potential third dam and hydroelectric generating station on the Peace River in northeastern B.C. Input received through consultation will be considered, along with technical, financial, environmental and economic development input, as BC Hydro evaluates alternatives and drafts the Integrated Resource Plan.

REVIEWING THE DRAFT INTEGRATED RESOURCE PLAN (FALL 2011)

In this final phase, First Nations, the public and stakeholders will be invited to provide their feedback on the draft Integrated Resource Plan. BC Hydro will consider this feedback as it prepares its final draft IRP for submission to government in early December 2011, after which government will review the plan and decide whether to approve it.

BC Hydro wants to hear from British Columbians as it develops its Integrated Resource Plan. To add your voice, attend a [public open house](#) in a community near you.

IRP PUBLIC OPEN HOUSE SCHEDULE*

Community	Date	Time	Location
Victoria	Wednesday, March 9	6:00 – 9:00 p.m.	Hotel Grand Pacific
Campbell River	Thursday, March 10	6:00 – 9:00 p.m.	Coast Discovery Inn & Marina
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Cranbrook	Thursday, April 7	6:00 – 9:00 p.m.	Prestige Rocky Mountain Resort and Convention Centre

*Please check bchydro.com/irp for schedule updates.

CONSULTATION TOPICS

Through this Consultation Workbook and Feedback Form, BC Hydro is seeking input on the following consultation topics:

1. **Conservation and Efficiency**
2. **Electricity Generation Options**
3. **Electrification**
4. **Transmission Planning**
5. **Export Market Potential**

A brief description of each of the consultation topics is provided below.

1. Conservation and Efficiency The first and best way to meet our future electricity needs is to reduce demand through conservation and energy efficiency. Conservation occurs when customers change their behaviours, business operations, equipment purchases, or capital investment decisions in ways that reduce electricity use. Methods of conservation include programs, electricity rates and government regulations designed to encourage or require customers to conserve electricity. The current conservation and efficiency plan is designed to reduce the forecast growth in demand by 79 per cent by 2020. This is above the new *Clean Energy Act* target of 66 per cent. One of the important questions in the IRP is whether BC Hydro should target additional savings from conservation and efficiency over and above our current significant plan to reduce growth by 79 per cent by 2020.

- 2. Electricity Generation Options** While British Columbians are doing more than ever to conserve electricity, electricity use is expected to continue to increase over the coming decades due to growth in population and among energy-intensive industries. BC Hydro will develop and analyze various portfolios (sets of resource options) that may be used to meet future electricity needs and clean energy objectives. Potential resource generation options include run-of-river hydro, biomass, wind, large hydroelectric with storage (Site C), natural gas, and emerging technologies, such as tidal and wave.
- 3. Electrification** Electrification describes the process of switching from other fuel sources to electricity. For example, switching vehicles from petroleum to electric or switching household heating or large industrial processes from natural gas. Efficient electrification is one way of supporting the province's greenhouse gas emission reduction targets. The Integrated Resource Plan will consider how potential electrification can affect electricity demand over time and what measures BC Hydro may need to take to serve its customers.

- 4. Transmission Planning** The transmission system, the essential link between electrical generators and energy consumers, is planned and designed to deliver energy efficiently and reliably. Because transmission lines require long lead times to plan and construct, the Integrated Resource Plan will assess the demand forecast and the transmission options that will most effectively meet those demands over the next 30 years.
- 5. Export Market Potential** While BC Hydro currently trades electricity when it has a short-term surplus, the B.C. *Clean Energy Act* includes the objective that the province be a net exporter of clean or renewable power. The Integrated Resource Plan will assess the export market potential, including the share of the clean energy market that B.C. could expect to capture, and make recommendations to the provincial government about what actions, if any, are required now.



August 2013

TOPIC 1: CONSERVATION AND EFFICIENCY

The latest forecasts show that demand for electricity in B.C. will grow by approximately 40 per cent over the next 20 years. That's the equivalent of adding the energy demand of five more cities the size of Vancouver to our system, before accounting for savings that can be achieved through conservation and efficiency. Conservation is the cleanest and least expensive way to meet demand.

Conservation – often referred to as demand-side management (DSM) – is BC Hydro's first strategy for closing the gap between future electricity demands and existing resources. Conservation options include programs, specifically designed electricity rates (e.g., residential inclining block rate), and government regulations.

From a planning perspective, however, it is difficult to guarantee a particular volume of conservation over time – dependent as that is on customers' behavioural response.

To be sure that it can reliably meet future demand, BC Hydro must evaluate conservation plans in a way similar to new generation options. Key questions include:

- How much additional electricity can be saved, in particular above the current plan, to reduce growth in demand by 79 per cent?
- By when can the electricity be saved?
- How certain are the savings in the existing conservation plan? How much risk is associated with extending that target? How persistent are the savings?
- What is the cost to create these savings?

Depending on what combination of conservation and efficiency measures is undertaken, BC Hydro can target different levels of savings. For this IRP, BC Hydro is evaluating a range of options that could provide savings of between 66 per cent and 83 per cent of the gap between current resources and anticipated demand.

GREATER CONSERVATION AND EFFICIENCY

To achieve significantly higher energy savings from current targets, BC Hydro would have to:

- Expand its Power Smart programs
- Send stronger signals through specially designed electricity conservation rates
- Request that the provincial and federal governments commit to bring in new conservation regulations

These measures combined would be expected to change societal norms and energy consumption patterns throughout the entire provincial electricity market. They might include making all buildings net zero consumers of electricity, meaning they produce as much electricity as they consume over the course of a year. This would require super-efficient building envelopes, widespread integration of district energy systems and small distribution generation, and more community densification, as well as best practices in construction and renovation. Every British Columbian would have to make energy efficiency a personal responsibility beyond what we currently do.



383 of 759



BC Hydro 
power smart
August 2013

The table below compares BC Hydro’s current plan to an approach that could achieve greater conservation and efficiency:

CONSERVATION (DSM) APPROACH	DESCRIPTION	TECHNICAL	FINANCIAL	ENVIRONMENTAL	ECONOMIC DEVELOPMENT
Current Plan	Combination of initiatives that include government regulations, conservation rates and Power Smart programs for all classes of customers (see sidebar).	Targets reducing 79 per cent of future load growth by 2020. Moderate uncertainty that expected electricity savings will materialize.	Less costly than buying or building new electricity supply.	Avoid environmental footprint because BC Hydro would not need to build new generation and transmission.	Moderately more jobs relative to new electricity generation options.
Greater Conservation and Efficiency	Increase in mandatory government regulations on energy efficiency. Send stronger rate signals through conservation rates. Expanded Power Smart programs to help consumers find savings.	Could achieve more savings than current approach above. Significant uncertainty that electricity savings will materialize.	Less costly than buying or building new electricity supply.	Avoid greater environmental footprint because BC Hydro would not need to build new generation and transmission.	More jobs relative to current plan and more jobs relative to an equivalent bundle of electricity generation options.

CURRENT CONSERVATION AND EFFICIENCY PLAN

BC Hydro is currently implementing a 20-year conservation and efficiency plan from the 2008 Long-Term Acquisition Plan that targets reducing the forecast growth in demand by 79 per cent by the year 2020. It contains four main strategies:

- 1. Government regulations:** The introduction of approximately 30 new federal and provincial government regulations and building code standards aimed at making buildings and equipment more energy efficient, including water heaters, windows, electronic equipment, lighting, appliances, motors, building code standards, and commercial and industrial equipment.
- 2. Conservation rates:** These rates, in place for more than 90 per cent of BC Hydro’s customers, encourage conservation by delivering a specially designed higher price signal for a portion of customers’ consumption. The rates are revenue neutral, in that BC Hydro collects the same amount of revenue as the original standard rate.
- 3. Power Smart programs:** Approximately 20 programs aim to help customers improve their energy efficiency and conserve electricity. Programs target residential, commercial and industrial customers and range from collecting old or second refrigerators to ensuring that new industrial plants are as energy efficient as possible.
- 4. Supporting initiatives:** These initiatives focus on things like public awareness, community engagement, and technology innovation and provide a foundation for the other three main strategies.

In the fiscal year ending March 31, 2010, BC Hydro spent \$135 million on conservation and efficiency measures for its 1.8 million customers.

For more information about BC Hydro’s Power Smart programs, go to bchydro.com/powersmart.








TOPIC 2:

ELECTRICITY GENERATION OPTIONS

While conservation can meet at least two-thirds of growth in our future electricity needs, BC Hydro must still consider other made-in-B.C. power supply options to meet anticipated demand. B.C. is fortunate to have a wealth of potential clean resources, including hydroelectric generating stations, biomass facilities and wind projects. The provincial *Clean Energy Act* requires that at least 93 per cent of B.C.’s electrical supply comes from clean or renewable sources, which allows for a limited amount of gas-fired generation to serve transmission-constrained areas and/or help meet peak loads. When considering these options, BC Hydro weighs key trade-offs including technical, financial, environmental, and economic development characteristics.

Options under consideration include a combination of BC Hydro projects, such as a hydroelectric dam, reservoir and generating station at Site C on the Peace River, as well as electricity purchases from potential projects representing a range of resource types.






POTENTIAL ENERGY RESOURCES		DESCRIPTION	RESOURCE POTENTIAL	Cost Range (\$F2011 / MWh)
	Biomass: • Wood-Based • Municipal Solid Waste • Biogas (Landfill)	<ul style="list-style-type: none"> Electricity generated by burning wood residues from the forest industry Biogas from landfills or municipal solid waste Provides reliable supply with both dependable capacity and firm energy 	<ul style="list-style-type: none"> Potential varies with availability of fuel source Some uncertainty may arise with regard to long-term fuel availability Wood-based biomass availability varies with the state of the forest industry Project developers face costs of emissions mitigation Identified within BC Clean Guidelines and may be certified as green energy 	\$77-\$200*
	Wind	<ul style="list-style-type: none"> Electricity generated from onshore or offshore wind farms using large wind-powered turbine generators Provides intermittent supply with low dependable capacity 	<ul style="list-style-type: none"> Potential located across the province Identified within BC Clean Guidelines and may be certified as green energy 	\$95-\$200*
	Geothermal	<ul style="list-style-type: none"> Electricity generated from high temperature naturally occurring gaseous or liquid water at a depth of up to 3000 m used to drive conventional power generation technologies Provides reliable supply with both dependable capacity and firm energy once geological formation is discovered and proven 	<ul style="list-style-type: none"> Potential varies with geological formations Large and uncertain initial capital investment related to exploration phase and confirmation of resource potential Identified within BC Clean Guidelines and may be certified as green energy 	\$71-\$200*
	Run-of-River	<ul style="list-style-type: none"> Electricity generated from water temporarily diverted from a stream (i.e., not significant storage reservoir), passed through turbines and returned to the stream Provides intermittent supply with low dependable capacity 	<ul style="list-style-type: none"> Potential located across the province Identified within BC Clean Guidelines and may be certified as green energy 	\$58-\$200*
	Large Hydro (Site C)	<ul style="list-style-type: none"> Electricity generated from water released from a storage reservoir and passed through turbines Would typically involve the construction of a dam on a river Provides reliable supply with both dependable capacity and firm energy Dispatchable with storage 	<ul style="list-style-type: none"> Large hydro projects often require long lead times – 10 years or more – and require early evaluation and study Proposed Site C dam on the Peace River would optimize upstream storage and regulation by taking advantage of water already stored in the Williston Reservoir <i>Clean Energy Act</i> prohibits, with the exception of the proposed Site C project, future large hydro projects in B.C. 	\$85**

385 of 759

August 2013

* Prices capped at \$200/MWh to reflect what might be acquired over the planning horizon.

** Cost is based on Site C’s 30-year-old historical design, as per Scenario G in the Site C Stage 1 Report (\$6.6 billion). An updated cost forecast is expected by spring 2011, based on an upgraded design for the proposed project.

POTENTIAL ENERGY RESOURCES		DESCRIPTION	RESOURCE POTENTIAL	Cost Range (\$F2011 / MWh)
	Natural Gas-Fired Generation & Cogeneration	<ul style="list-style-type: none"> Electricity generated from high-efficiency gas-fired turbines Provides reliable supply with both dependable capacity and firm energy May be situated on existing industrial sites Dispatchable 	<ul style="list-style-type: none"> Project developers face long-term fuel availability/price risks and cost of greenhouse gas emissions 	\$79-\$109
	Coal-Fired Generation with Carbon Capture and Storage	<ul style="list-style-type: none"> Integrated Gasification Combined Cycle (IGCC) process gasifies coal into a synthetic gas that is burned in a combined cycle generator to produce electricity Provides reliable supply with both dependable capacity and firm energy 	Emerging Technology: <ul style="list-style-type: none"> Large-scale greenhouse gas capture and sequestration technology not yet commercially available Project developers face long-term fuel availability/price risks and cost of greenhouse gas emissions, sequestration 	\$81
	Wave	<ul style="list-style-type: none"> Electricity generated from waves Provides intermittent supply with low dependable capacity 	Emerging Technology: <ul style="list-style-type: none"> Technologies at early stages of commercial development 	\$480-\$824
	Tidal	<ul style="list-style-type: none"> Electricity generated from tides Predictable intermittent supply with low dependable capacity 	Emerging Technology: <ul style="list-style-type: none"> At early stage of tidal current technologies Limited total extractable resource owing to technical limitations and environmental considerations 	\$227-\$850
	Large-Scale Solar	<ul style="list-style-type: none"> Electricity is generated from sunlight using photovoltaic cells. Provides intermittent supply with low dependable capacity 	<ul style="list-style-type: none"> Potential varies with length of day and availability of sunlight. Throughout the year, power generation fluctuates with cloud cover. 	\$351-\$410

SITE C PROJECT DESCRIPTION



BC Hydro is proposing to develop a dam and hydroelectric generating station on the Peace River in northeast B.C. The Site C Clean Energy Project (Site C) would involve the construction and operation of a third dam and hydroelectric generating station on the Peace River, downstream from the existing Williston and Dinosaur reservoirs and the respective BC Hydro generating facilities at G.M. Shrum and Peace Canyon.

If approved, Site C will provide approximately 900 megawatts (MW) of capacity, and produce an average of 4,600 gigawatt hours (GWh) of electricity each year – enough to power more than 400,000 homes. Site C would be publicly owned and become a heritage asset for BC Hydro. Compared to conventional or renewable alternatives, Site C would have higher up-front capital costs but lower long-term operating costs, and it would provide a clean and renewable source of firm and reliable electricity for more than 100 years.

SITE C PUBLIC AND STAKEHOLDER CONSULTATION

Site C is currently in Stage 3 (Environmental and Regulatory Review). This stage will include consultation with the public, communities and property owners, as well as with the Province of Alberta and the Northwest Territories. In addition, BC Hydro and First Nations communities are engaged in a continuing consultation process.

The following public and stakeholder consultation will be included:

- Local Government Liaison
- Property Owner Consultation
- Environmental Assessment and Regulatory Processes
- Preliminary Design Consultation

A range of consultation methods will be utilized, including the Fort St. John and Hudson’s Hope Community Consultation Offices, stakeholder meetings, open houses, print and online feedback forms, and written submissions.

For more information on Site C, visit bchydro.com/sitec.

COMPARING RESOURCE ELECTRICITY GENERATION OPTIONS

Here are three example portfolios that could serve the additional electricity needs of our customers. These portfolios have different blends of electricity generation options and the associated backup that may be required to meet customer needs at all times of the year.

The example portfolios contain different combinations of potential wind and run-of-river projects from Independent Power Producers, the Site C project and gas-fired generation (up to 7 per cent, based upon the 93 per cent *Clean Energy Act* target).

Depending on the amount of intermittent resources like wind and run-of-river in a portfolio, more backup generation may be required. Backup options include additions at existing BC Hydro large hydroelectric generating facilities, or new pumped storage facilities or gas-fired generation.

Each portfolio is described in terms of the resources it would contain and the associated technical, financial, environmental, and economic development characteristics.

These portfolios are offered as examples to illustrate key trade-offs that arise between various electricity generation options.

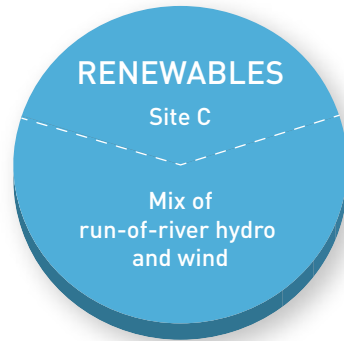
RENEWABLES

Mix of
run-of-river hydro
and wind

PORTFOLIO 1 – RENEWABLE MIX

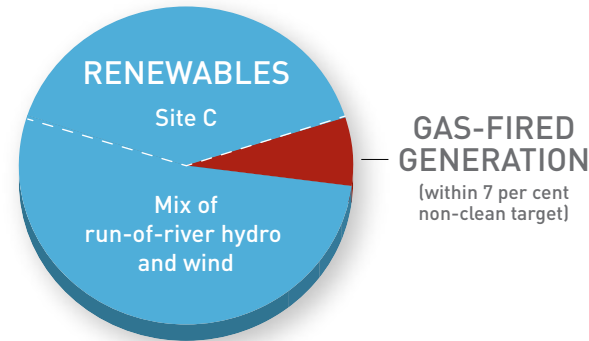
This portfolio includes a mix of renewable resources such as wind, run-of-river and biomass from Independent Power Producers. The Site C Project is specifically excluded. Given that wind and run-of-river hydro are intermittent resources, this portfolio requires backup resources when the intermittent sources are not available. These backup resources would generally consist of additions at existing BC Hydro generating facilities, or new pumped storage facilities or gas-fired generation. This portfolio has low greenhouse gas emissions, with a geographically widespread environmental footprint. The cost of renewable resources and the need for backup resources make this the most expensive portfolio of the three.





PORTFOLIO 2 – RENEWABLE MIX WITH SITE C

This portfolio includes a mix of renewable resources that include Site C along with wind, run-of-river and biomass projects from Independent Power Producers. Site C is included to provide system storage and capacity to back up intermittent resources, but ongoing additions at existing BC Hydro generating facilities and additional capacity and storage still may be required if a large amount of intermittent resources are added. This portfolio has the lowest greenhouse gas emissions, with its environmental and social footprint concentrated in the Peace region. This portfolio will have a lower cost than Portfolio 1.



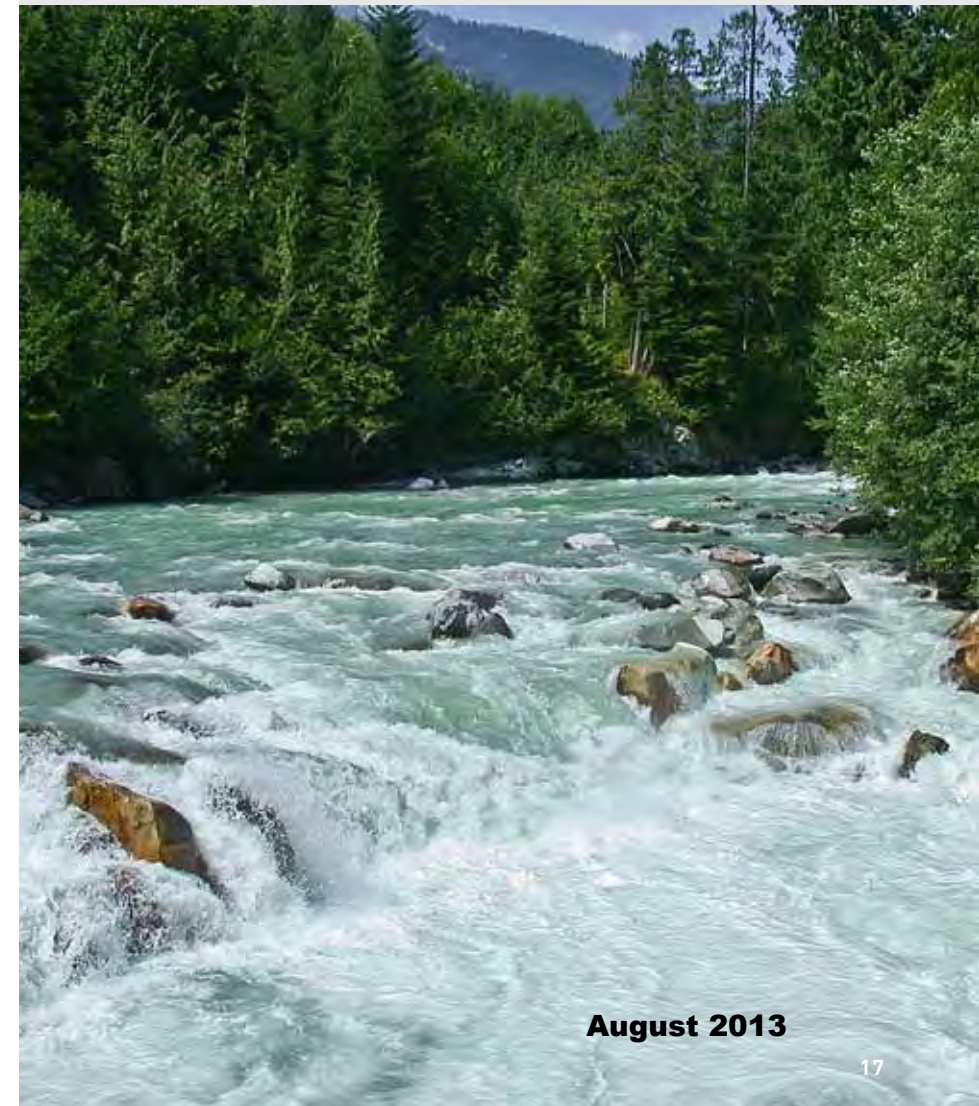
PORTFOLIO 3 – RENEWABLE MIX WITH SITE C AND GAS-FIRED GENERATION (WITHIN 93 PER CENT CLEAN ENERGY ACT TARGET)

This portfolio includes Site C, other potential renewable resources such as wind and run-of-river from Independent Power Producers, and gas-fired generation allowable under *Clean Energy Act* limits. Both Site C and gas-fired generation are available to back up intermittent resources. This portfolio has higher greenhouse gas emissions than Portfolios 1 and 2 due to its reliance on natural gas-fired generation, and has a more concentrated environmental footprint in the Peace region. It has the lowest cost if the price of natural gas remains low but, again, this is subject to uncertain natural gas and carbon emission prices.














POLICY CONTEXT FOR PORTFOLIOS

The *Clean Energy Act* specifies limits for what can be included in a portfolio:

- Future development of specified large-scale hydroelectric storage projects on river systems in B.C. is limited to Site C
- No nuclear resources
- No coal resources without the capture and storage of carbon dioxide



The table below highlights different characteristics and trade-offs associated with each electricity generation portfolio:

ELECTRICITY GENERATION PORTFOLIO	DESCRIPTION	TECHNICAL	FINANCIAL	ENVIRONMENTAL	ECONOMIC DEVELOPMENT
PORTFOLIO 1 Renewable Mix	Renewable mix. No Site C. No gas. Base Energy: 827  72  Backup:  	Requires backup generation. Reduces the electricity system's flexibility to respond to changes in demand.	Higher cost. No ownership of assets at end of contract term with Independent Power Producers. \$\$\$\$	Lower GHG emissions. Geographically widespread environmental footprint.	Geographically widespread jobs. Same GDP and tax revenue.
PORTFOLIO 2 Renewable Mix With Site C	Renewable mix including Site C. No gas. Base Energy: 496  43  1  Backup: 	Increased system flexibility to respond to changes in demand. Requires less backup generation than Portfolio 1.	Lower cost of clean resource. Lower long-term price risk. Larger up-front single capital cost but low operating costs. Public ownership of a 100-year expected life asset. \$\$\$\$	Lower GHG emissions. More concentrated/localized footprint in the Peace region.	More job-intensive capital project and concentrated jobs in the Peace region. Same GDP and tax revenue.
PORTFOLIO 3 Renewable Mix with Site C and Gas-Fired Generation (within 93 per cent <i>Clean Energy Act</i> target)	Renewable mix with wind, Site C and gas within 93 per cent <i>Clean Energy Act</i> target. Base Energy: 438  38  1  1  Backup: 	Requires no backup. Highest flexibility of system to respond to changes in demand.	Lowest cost of the three. \$\$\$	Higher GHG emissions. More concentrated/localized footprint in the Peace region.	More job-intensive capital project and concentrated jobs in the Peace region and wherever the gas plant is sited.

Note: The symbols provide a general reference tool to compare the three sample portfolios. They represent resource requirements for a 10,000 GWh and 1,800 MW sample portfolio, and relative portfolio costs.

 WIND TURBINES  RUN-OF-RIVER PROJECTS  GAS PEAKING PLANTS  LARGE HYDRO (SITE C)  BACKUP  COST

TOPIC 3: ELECTRIFICATION

WHAT IS ELECTRIFICATION?

Provincial greenhouse gas (GHG) reduction targets will require making deep cuts in GHG emissions in the coming decades. One way to reduce those emissions is by switching from fossil fuel energy to electrical energy derived from clean generation sources. This is referred to as electrification. BC Hydro's clean electricity supply therefore has a key role to play in BC's Climate Action Plan by helping the province reduce GHG emissions.

The *Clean Energy Act* includes, as an energy objective for B.C., "to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia".

WHERE MIGHT ELECTRIFICATION OCCUR?

Fuel switching to clean electricity could occur across the economy. The transportation sector is the largest source of GHG emissions in B.C., and replacing vehicles that use gasoline and diesel with electric vehicles could be one of the most significant long-term actions B.C. could take to reduce emissions.

Many of the large automakers are bringing electric vehicles to market in the near future; key models include the Chevy Volt and the Nissan LEAF. The impact of electric vehicles will depend on availability, price and customer acceptance.

Successful introduction of electric vehicles will require that consumers are able to charge their vehicles, and that any charging infrastructure is smoothly integrated into the grid. BC Hydro has an obligation to be ready to serve electric vehicles' electricity requirements, should our customers decide to embrace the technology.

Also in the transportation sector, the provision of shore power can enable ships to avoid running generators while in port. The cruise ship terminal in Vancouver and the container terminal in Prince Rupert already have shore power.

Air and ground source heat pumps can be extremely efficient sources of energy for heating and cooling homes and buildings. Switching from oil or natural gas to efficient heat pumps can significantly reduce residential and commercial GHG emissions and can lower overall energy consumption.

In the industrial sector, electrification options include the use of electric compressors to replace those fuelled by natural gas in the growing number of natural gas fields in northeastern B.C. Electricity can also be used to replace diesel generators and to drive mining conveyor systems that replace diesel trucks.

Given that economic growth, energy prices and other factors are already driving electrification, BC Hydro includes all reliable new demand in its load forecast. The 2010 Electricity Load Forecast incorporates some electric vehicle take-up and also some industrial conversion from fossil fuels, particularly in the oil and gas sector.

ELECTRIC VEHICLES

A long-term benefit of electric vehicles is the potential to reduce GHG emissions, as 38 per cent of B.C.'s emissions are attributed to transportation. A move to plug-in vehicles will also reduce the cost of fleet operations and reduce reliance on fuel imports.



A potential fuel switch of this magnitude presents a number of issues for the provincial electricity grid, including:

- Long-term impacts to transmission and generation (the rate of load growth from electric vehicles is expected to be gradual and well within BC Hydro's planning cycles)
- Near-term impacts on distribution infrastructure
- Impacts on the relationship with customers and their expectations of BC Hydro as a transportation energy supplier

To prepare for this possibility in the next five to 20 years, BC Hydro has undertaken numerous initiatives over the past few years to learn more about how plug-in vehicles will interact with the hydroelectric system, including:

- The creation of charging infrastructure guidelines
- Participation in a provincial working group
- Implementation of agreements with manufacturers to demonstrate different models of plug-in vehicles in B.C.

WHEN MIGHT ELECTRIFICATION OCCUR?

Electrification requires equipment changes that normally occur over the short, medium or long term. In some sectors, equipment is replaced fairly frequently; for example, vehicle fleets will turn over several times by 2050. In other cases, infrastructure is replaced slowly; most of the 2050 housing stock has already been built.

Electrification also depends on the rate of commercialization and acceptance of new technologies. For example, electric vehicles will not likely gain wide acceptance until the purchase costs are closer to conventional vehicles and consumers are satisfied they will have reliable places to recharge.

Government and BC Hydro actions can also influence the timing and nature of new investments in energy-using equipment, as well as the commercialization of new technologies, and therefore influence the rate at which electrification occurs.

APPROACH TO ELECTRIFICATION

Under its current responsive approach (outlined on the next page), BC Hydro does not encourage fuel switching; rather, it forecasts and responds to the fuel switching that occurs naturally. As part of its obligation to serve, BC Hydro will ensure that, as electric vehicles arrive in B.C. and as customers request electricity services, the generation, transmission and distribution systems are able to meet that demand.

In a proactive approach, BC Hydro would work with government and other partners to promote and encourage efficient electrification to benefit customers and to reduce greenhouse gas (GHG) emissions. Under this approach, BC Hydro could support the development of charging infrastructure in advance of significant electric vehicle sales in B.C., thereby encouraging consumers to purchase electric vehicles. BC Hydro could also introduce programs to encourage electrification in other market sectors, such as industry and port operations. BC Hydro can also expand its transmission and distribution systems, providing electricity service to new customers. The wider availability of clean electricity will not only reduce emissions but may also spur new investment and economic activity. In this approach, BC Hydro would work to ensure that new electricity consumption is as efficient as possible.



The table below highlights different characteristics and trade-offs associated with each electrification approach:

ELECTRIFICATION APPROACH	DESCRIPTION	TECHNICAL	FINANCIAL	ENVIRONMENTAL	ECONOMIC DEVELOPMENT
RESPONSIVE APPROACH TO ELECTRIFICATION	BC Hydro responds to electrification driven by customers' needs, and works to ensure electricity is used efficiently as part of its obligation to serve customers' needs.	Increased electricity supply required to support this level of electrification is already being considered by BC Hydro.	Natural electrification included in current rate forecast.	Modest long-term reductions in GHG emissions in B.C. from displaced fossil fuel use. Modest reductions in air pollutants. Environmental footprint from additional electricity supply.	Modest increase in clean energy sector economic development/jobs. This would result in redistribution of economic resources to clean energy sector from other parts of the economy.
PROACTIVE APPROACH TO ELECTRIFICATION	BC Hydro works with government and other partners to facilitate and encourage increased efficient electrification.	Requires additional electricity supply beyond what BC Hydro is currently considering. Most electrification growth would occur after 2020.	Increase in utility costs to supply electricity and promote electrification. Financial risk if electrification does not occur as forecasted.	Significant reductions in GHG emissions in B.C. Significant reductions in air pollutants and human health impacts. Additional environmental footprint from additional electricity supply.	Moderate increase in clean energy sector economic development/jobs. This would result in shifting economic resources to clean energy sector from other parts of the economy. Expansion of the electricity grid could spur new economic activity.



Courtesy of Port Metro Vancouver



392 of 759



August 2013
Courtesy of Port Metro Vancouver

TOPIC 4:

TRANSMISSION PLANNING

The system that delivers electricity to British Columbians is divided into two major infrastructures: the transmission system, which carries high-voltage electricity from where it is generated to the cities, towns and industrial centres where it is consumed, and the distribution system, which delivers lower voltage electricity to individual customers. The IRP will examine the high-voltage province-wide transmission system by analyzing the investments that may be needed to ensure the system can meet future electricity requirements. The IRP will also examine regional transmission requirements in areas such as Fort Nelson, where new transmission may be an option for an area that is facing potentially significant demand growth from the oil and gas sector. The IRP will also examine regional transmission requirements needed to connect clusters of new generation resources to the bulk system.

As a result of the *Clean Energy Act*, which integrated BC Hydro with the former BC Transmission Corporation, BC Hydro’s IRP will now include a description of transmission infrastructure demands 30 years out, which is a reflection of the long lead times required for planning, siting and constructing transmission lines.

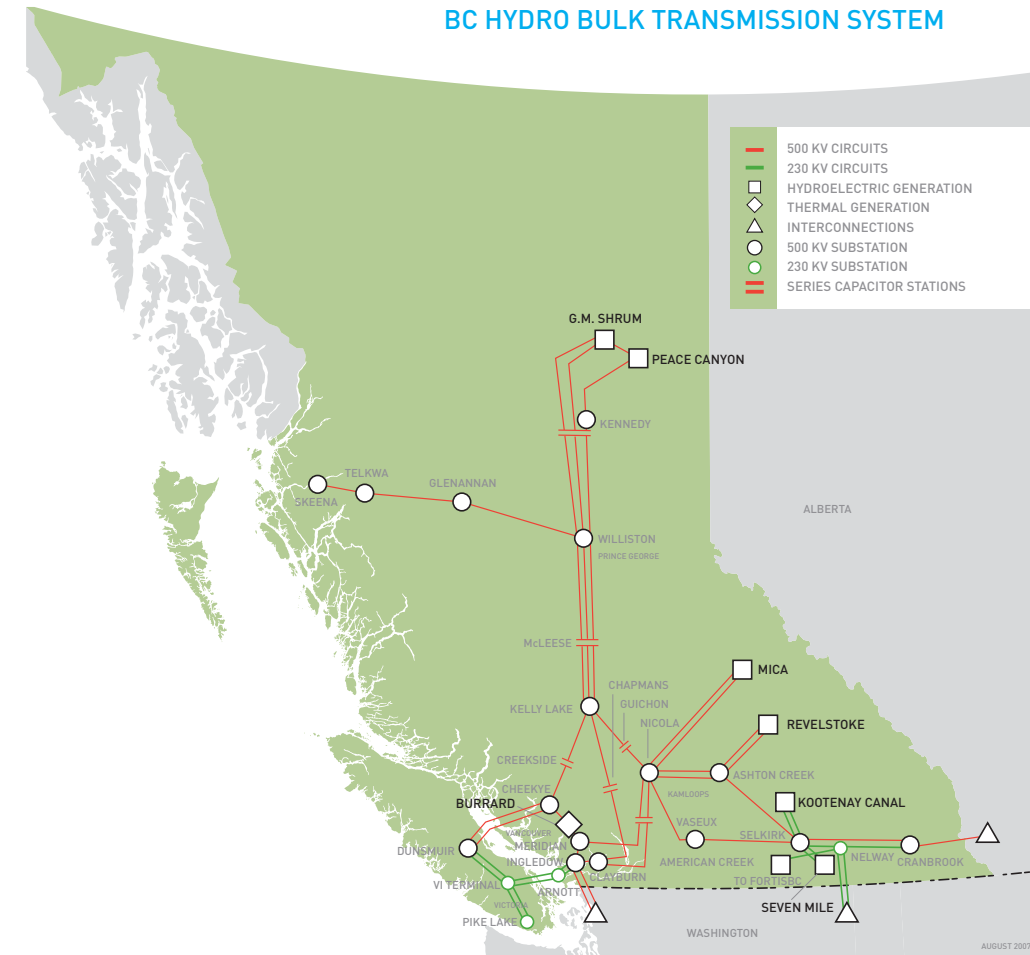
When assessing future bulk transmission system requirements, planners need to consider the following:

- The need to maintain an optimal level of reliability for customers
- Growth in demand by geographic area
- Potential location and size of new generation resources
- The need to minimize electricity losses that occur when electricity is carried over long distances
- The expected retirement or refurbishment of existing transmission resources

In recent years, the provincial government and utilities have become increasingly concerned about timely development of transmission infrastructure. In the past, transmission systems have been planned in response to generation projects and demand growth that were expected to occur. This approach increasingly poses the following risks:

- Generation projects may be completed before transmission lines are ready or may need to be delayed until lines can be finished
- Generation projects might develop in a way that leads to a spiderweb of intersecting transmission lines that are inefficient and have avoidable adverse environmental impacts (see diagrams on page 23)
- New demand for electricity may occur sooner than transmission lines can be built to provide the service

BC HYDRO BULK TRANSMISSION SYSTEM



Planners are now looking farther into the future to anticipate where the largest potential exists for generation options and consumer needs. Rather than responding to individual projects, this process identifies where clusters of projects could appear across the province (i.e., regions with a combination of run-of-river, wind and biogas potential). This allows planners to lay out transmission systems in an optimal way. However, a key risk is that a transmission investment might be stranded if generation resources do not develop as expected.

Other considerations in this longer term planning regime include the following:

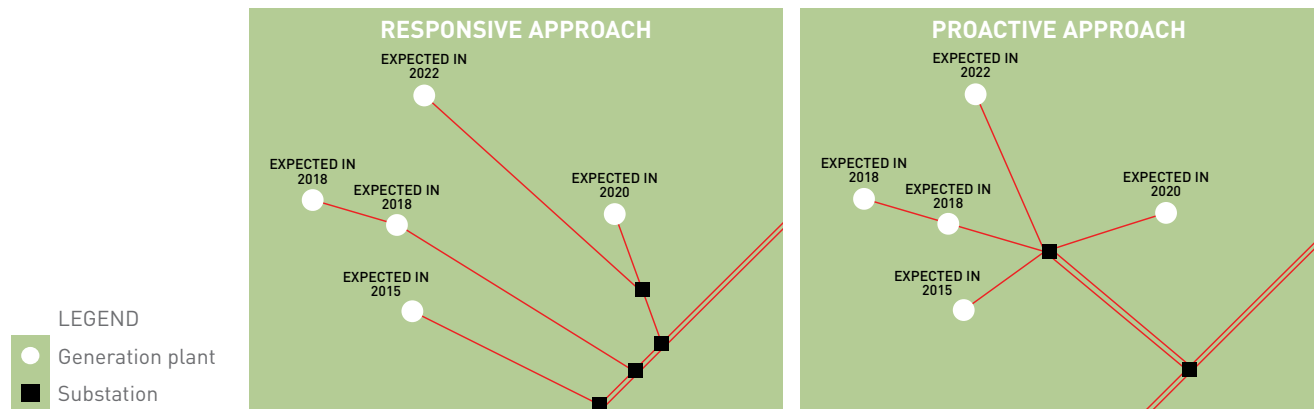
- Potential for transmission lines to spur regional economic development
- Potential cost savings and environmental benefits from avoiding multiple transmission lines
- Potential to facilitate the use of clean or renewable electricity rather than GHG-intensive fuels; for example, by targeting transmission for the oil and gas sector in the province’s northeast

The critical question is the extent to which BC Hydro should consider, plan and build transmission lines in anticipation of need. Two broad and distinctly different approaches are described for consultation purposes:

RESPONSIVE APPROACH: BC Hydro develops transmission plans in response to forecast need.

PROACTIVE APPROACH: BC Hydro develops long-term transmission plans in anticipation of potential future need over a 30-year horizon.

While BC Hydro is likely to use both approaches going forward, emphasis can be placed on one or the other.



The table below highlights different characteristics and trade-offs associated with each transmission planning approach:

TRANSMISSION PLANNING APPROACH	DESCRIPTION	TECHNICAL	FINANCIAL	ENVIRONMENTAL	ECONOMIC DEVELOPMENT
RESPONSIVE APPROACH	BC Hydro develops transmission plans in response to forecast need.	Higher reliability risk if transmission delayed. May lead to suboptimal build of the transmission system in the long run.	Lower transmission costs in the short term but risk of higher costs in the long run due to suboptimal system build.	Lower transmission footprint in the short term, but higher in the long term due to suboptimal system build.	May constrain economic development in certain regions or communities, as there may not be enough transmission.
PROACTIVE APPROACH	BC Hydro develops long-term transmission plans in anticipation of potential future need over a 30-year horizon.	Lower reliability risk. Leads to larger transmission projects.	Higher transmission costs in the short term. Lower costs in long term due to optimal system design if growth materializes. Risk of stranded investment if need does not materialize.	Higher transmission footprint in the short term but lower in the long run if need materializes.	May facilitate economic development in certain regions or communities, as transmission has been planned and built to facilitate this.



395 of 759



August 2013

TOPIC 5:

EXPORT MARKET POTENTIAL

ENERGY EXPORT

BC Hydro, through its wholly owned subsidiary Powerex, has a long and successful track record of trading electricity. As discussed in the sidebar, BC Hydro’s reservoirs and the connectivity of its integrated bulk transmission system to Alberta and the western United States have enabled electricity trading that has provided a range of benefits for BC Hydro and its customers. For example, it has provided power and system stability when British Columbians have needed it, and it has enabled BC Hydro to keep rates lower by taking advantage of imported electricity when it is inexpensive. In the future, these transmission links could open up markets for new clean electricity generated by producers in B.C. to support economic development in regions across the province.



WHAT IS NEW?

In the new *Clean Energy Act*, one of B.C.’s energy objectives is that B.C. should be a net exporter. The Act directs BC Hydro to assess the potential export market for clean resources. BC Hydro may also acquire, subject to Cabinet approval, renewable energy from Independent Power Producers in B.C. for the sole purpose of exporting to Alberta or the U.S. Importantly, the Act protects existing BC Hydro ratepayers from the cost risks associated with energy purchased solely for export. It stipulates that the benefits derived from the existing BC Hydro system are to continue to flow to ratepayers and that the costs of building or acquiring renewable energy solely for the purpose of exporting are not to be recovered from ratepayers.

For planning purposes, it is important to distinguish between two different types of potential export activity:

- **Current Approach – “Traditional” Exports:** these are exports of surplus energy during times when BC Hydro has excess water in the hydroelectric system, including energy that is acquired to achieve the legal requirement of self-sufficiency by 2016 with an additional 3,000 GWh of “insurance” by 2020
- **Clean Generation for the Purpose of Export:** these are exports that would come from the aggregation of renewable energy from Independent Power Producers in B.C. for the sole purpose of long-term export contracts

For purposes of the IRP, the latter new approach to considering export is the focus of this Consultation Topic: Export Market Potential.

IMPORTING AND EXPORTING ELECTRICITY HAS BENEFITS



Exports and imports are a natural part of integrated electricity systems. In regions that are dependent on hydroelectric power, as is the case in B.C. and the Pacific Northwest of the United States, trade in electricity helps utilities address natural variations in water supply (wet years and dry years) that change by season and year. Similarly, trade can be beneficial when different regions have different electricity usage depending on the season – for example, in winter, when usage is highest in the Pacific Northwest, it is lower in the desert regions of the southwest.

While electricity exports happen in every year, just as imports do, it is the difference between the two that determines whether a utility is a net exporter or importer. For many years, BC Hydro sold more energy than it bought. However, as domestic demand has crept up, BC Hydro has found itself becoming a net importer – in some years, purchasing more than 10 per cent of B.C.’s total annual electricity consumption.

BC Hydro, through its wholly owned subsidiary Powerex, has had a long and successful track record of importing and exporting energy for the benefit of British Columbians. Originally established in 1988 to market the province’s surplus electricity, Powerex’s trading activity has evolved and now much of Powerex’s trading activity is not directly linked to the BC Hydro system. Powerex has enabled BC Hydro to make the best use of its resources and has ensured a stable electricity supply while generating revenue that has helped keep rates low for customers.

BC Hydro’s bulk transmission system has connection points both to Alberta and the western United States. A key ingredient in BC Hydro’s electricity trade is the flexibility created by the large reservoirs behind its major dams. These reservoirs enable BC Hydro to make economic decisions about when to use the water to generate electricity and when to take advantage of the other sources. For example, when water levels in B.C. are high, or demand in the market is high (during peak periods of the day or the year), Powerex can export electricity at a premium. And if water levels are low or import prices are attractive (in non-peak periods), Powerex can purchase electricity from our neighbours in Alberta and the western United States.

CLEAN GENERATION FOR EXPORT

The *Clean Energy Act* requires BC Hydro to prepare an IRP by December 2011 (and every five years thereafter). Among other things, the IRP must include:

- An assessment of demand for renewable energy in markets that BC Hydro can serve
- An estimate of the market share that BC Hydro might capture
- An estimate of the expenditures that will be required to undertake exports beyond traditional exports

Upon reviewing the IRP, the provincial government may direct BC Hydro to begin acquiring energy from Independent Power Producers in B.C. explicitly for export. The government has stated that it will only begin this process if there is a clear business case demonstrating that such exports will provide a benefit to British Columbians.

BC Hydro will consider a number of factors when examining export market opportunity, including:

- Current and potential federal, provincial and state energy and environmental policies
- The estimated size of the renewable electricity market under current and potential policies

- The amount of existing clean or renewable generation capacity
- The competitiveness of B.C. resources and the market share that B.C. could expect to capture
- The transmission infrastructure needed to optimize power generation to satisfy self-sufficiency with insurance requirements
- The transmission infrastructure necessary to enable long-term electricity exports
- Public, First Nations and stakeholder input

The table below summarizes the differences between the current approach – “traditional” exports – and an additional approach - clean generation for the purpose of export:

EXPORT APPROACH	DESCRIPTION	TECHNICAL	FINANCIAL	ENVIRONMENTAL	ECONOMIC DEVELOPMENT
CURRENT APPROACH – “TRADITIONAL” EXPORTS	Sell the surplus capability (system) including that which arises from achieving self-sufficiency by 2016 and insurance by 2020.	System reliability maintained at planned levels.	First \$200 M of net income from trade goes to ratepayers. Any losses and any net income above \$200 M goes to the Province.	The transmission system will only be expanded to maintain reliability, to meet domestic load, and to comply with the requirement of self-sufficiency/insurance.	Sources of attractively priced power may provide economic development benefits to B.C.
CLEAN GENERATION FOR THE PURPOSE OF EXPORT	Acquiring additional renewable energy produced in B.C. for the sole purpose of export. This will cause additional Independent Power Producers generation projects to be built in B.C.	System reliability maintained at planned levels.	Additional revenues for the Province to the extent that sales of renewable energy exceed the costs involved in delivering electricity to other jurisdictions.	Additional environmental footprint in B.C. and elsewhere due to building additional clean generation resources and additional transmission in B.C. to deliver electricity to markets in the U.S.	Potentially more jobs, GDP and tax revenue than current approach. (Will lead to additional clean electricity generation construction and generation jobs in the regions.)



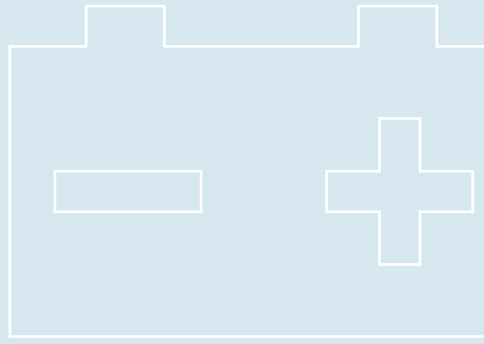
2011 INTEGRATED RESOURCE PLAN

PLANNING FOR A CLEAN ENERGY FUTURE

CONSULTATION WORKBOOK

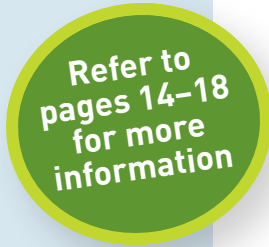
MARCH 1 – APRIL 30, 2011

FEEDBACK FORM



ELECTRICITY GENERATION OPTIONS

These portfolios are offered as examples to illustrate key trade-offs that arise between generation options.



PORTFOLIO 1: RENEWABLE MIX

This portfolio includes a mix of renewable resources such as wind, run-of-river and biomass from Independent Power Producers. The Site C Project is specifically excluded. Given that wind and run-of-river hydro are intermittent resources, this portfolio requires backup resources when the intermittent sources are not available. These backup resources would generally consist of additions at existing BC Hydro generating facilities, or new pumped storage facilities or gas-fired generation. This portfolio has low greenhouse gas emissions, with a geographically widespread environmental footprint. The cost of renewable resources and the need for backup resources make this the most expensive portfolio of the three.

Here are some trade-offs and other factors to consider:

- More diverse mix of renewable resources
- More dispersed regional jobs
- Lower greenhouse gas emissions and more dispersed environmental footprint
- Requires additional backup (capacity) resources
- Costs more than other portfolios

Base Energy: **827** **72** Backup:

Cost: **\$\$\$\$**

Q2.1

Please indicate your level of agreement with Portfolio 1 – Renewable Mix. In developing your response, please consider the summary to the left, including the trade-offs and other factors that have been provided.

(please check one box only)

- Strongly Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Strongly Disagree

Please provide any comments in the space provided below to explain the reasons for your agreement or disagreement.*

*For privacy reasons please do not provide opinions about identifiable third parties.

**PORTFOLIO 2:
RENEWABLE MIX WITH SITE C**

This portfolio includes a mix of renewable resources, that include Site C along with wind, run-of-river and biomass projects from Independent Power Producers. Site C is included to provide system storage and capacity to back up intermittent resources, but ongoing additions at existing BC Hydro generating facilities and additional capacity and storage still may be required if a large amount of intermittent resources are added. This portfolio has the lowest greenhouse gas emissions, with its environmental and social footprint concentrated in the Peace region. This portfolio will have a lower cost than Portfolio 1.

Refer to pages 14–18 for more information

Here are some trade-offs and other factors to consider:

- Economic and environmental impacts are relatively more geographically concentrated
- Lowest greenhouse gas emissions
- Requires less backup generation than Portfolio 1
- Relatively lower cost – lower than Portfolio 1, but higher than Portfolio 3

Base Energy: **496**  **43**  **1**  Backup: 

Cost: **\$\$\$**

Q2.2

Please indicate your level of agreement with Portfolio 2 – Renewable Mix with Site C. In developing your response, please consider the summary to the left, including the trade-offs and other factors that have been provided.

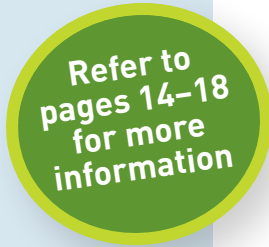
(please check one box only)

- Strongly Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Strongly Disagree

Please provide any comments in the space provided below to explain the reasons for your agreement or disagreement.*

*For privacy reasons please do not provide opinions about identifiable third parties.

**PORTFOLIO 3:
RENEWABLE MIX WITH SITE C AND
GAS-FIRED GENERATION (WITHIN 93 PER CENT
CLEAN ENERGY ACT TARGET)**



This portfolio includes Site C, other potential renewable resources such as wind and run-of-river from Independent Power Producers, and gas-fired generation allowable under *Clean Energy Act* limits. Both Site C and gas-fired generation are available to back up intermittent resources. This portfolio has higher greenhouse gas emissions than Portfolios 1 and 2 due to its reliance on natural gas-fired generation, and has a more concentrated environmental footprint in the Peace region. It has the lowest cost if the price of natural gas remains low but, again, this is subject to uncertain natural gas and carbon emission prices.

Here are some trade-offs and other factors to consider:

- Fewer renewable resources and relatively higher greenhouse gas emissions
- High degree of operating control (as a result of lower intermittency) and no backup resources required
- Lower initial cost, but higher risk of higher future costs due to volatile natural gas prices and greenhouse gas emissions offset cost

Base Energy: 438 38 1 1 Backup:

Cost: \$\$\$

Q2.3

Please indicate your level of agreement with Portfolio 3 – Renewable Mix with Site C and Gas-Fired Generation (within 93 per cent *Clean Energy Act* target). In developing your response, please consider the summary to the left, including trade-offs and other factors that have been provided.

(please check one box only)

- Strongly Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Strongly Disagree

Please provide any comments in the space provided below to explain the reasons for your agreement or disagreement.*

Q2.4

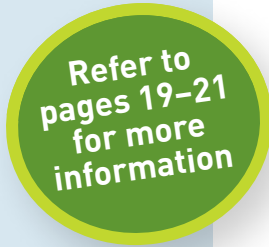
Do you have any other comments about electricity generation resource options to meet customers' future electricity needs? (please provide any comments in the space provided)*

*For privacy reasons please do not provide opinions about identifiable third parties.

ELECTRIFICATION

ELECTRIFICATION: ACTIVE PROMOTION BY BC HYDRO

With a proactive approach to electrification, BC Hydro would work with government and other partners to facilitate and encourage increased electrification where it can reduce greenhouse gas (GHG) emissions and benefits to customers. Under this approach, BC Hydro could support the early development of an electric vehicle charging infrastructure in advance of significant electric vehicle sales in B.C., thereby encouraging consumers to purchase these vehicles. BC Hydro could also introduce other programs to encourage electrification in other areas.



Here are some trade-offs and other factors to consider:

- Additional reductions in provincial greenhouse gas emissions can be achieved
- Additional electrification, over what will happen in B.C. on its own, would increase the need for electricity generation resources to be built in the province
- BC Hydro's promotion of electrification could result in increased electricity rates for BC Hydro customers because of the additional resources needed to serve and promote the new demand

Q3.

Please indicate your level of agreement with this approach to electrification that involves active promotion by BC Hydro. In developing your response, please consider the summary to the left, including as well as the trade-offs and other factors that have been provided.

(please check one box only)

- Strongly Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Strongly Disagree

Please provide any comments in the space provided below to explain the reasons for your agreement or disagreement.*

*For privacy reasons please do not provide opinions about identifiable third parties.

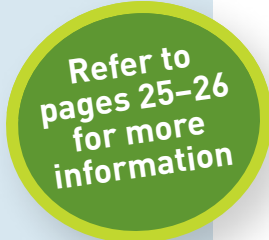
EXPORT MARKET POTENTIAL

CLEAN GENERATION FOR THE PURPOSE OF EXPORT

Consistent with the *Clean Energy Act*, which requires BC Hydro to undertake an assessment of the export market demand for clean or renewable energy, the energy would come from the aggregation of renewable energy acquired from Independent Power Producers in B.C. solely for the purpose of exporting this electricity to markets outside B.C.

Here are some trade-offs and other factors to consider:

- Additional electricity generation projects would be built by Independent Power Producers within the province
- The environmental footprint from additional clean or renewable electricity generation projects would occur in B.C., versus other jurisdictions
- Building generation resources across the province would lead to increased construction and maintenance jobs in the regions
- Ratepayers are protected from bearing any negative financial consequences, as per the *Clean Energy Act*
- Economic benefits and additional revenue from this electricity generation would flow to the Province



Q5.

Please indicate your level of agreement with this export approach. In developing your response, please consider the summary to the left, including the trade-offs and other factors that have been provided.

(please check one box only)

- Strongly Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Strongly Disagree

Please provide any comments in the space provided below to explain the reasons for your agreement or disagreement.*

*For privacy reasons please do not provide opinions about identifiable third parties.

HOW INPUT WILL BE USED

Input received through consultation will be considered, along with technical, financial, environmental, and economic development input, as BC Hydro evaluates alternatives and drafts the Integrated Resource Plan.

A Consultation Summary Report summarizing input received through consultation, will be posted on BC Hydro's website at bchydro.com/irp.

FEEDBACK DEADLINE:

Please submit your feedback by **APRIL 30, 2011**.

Please provide your contact information *(optional)*:

Name: _____	
Address: _____	Postal Code: _____
Phone: _____	Email: _____

Consent to Use Personal Information

I consent to the use of my personal information by BC Hydro for the purpose of contacting me and keeping me updated about future consultations on integrated resource planning. For the purposes of the above, "my personal information" includes name, mailing address, telephone number, and email address, as per the information I provide.

Signature: _____ Date: _____

BC Hydro is collecting information with this form for the purpose of its Integrated Resource Plan in accordance with BC Hydro's mandate under the *Hydro and Power Authority Act*, the BC Hydro Tariff, the *Clean Energy Act* and related Regulations and Directions. If you have any questions regarding the information collection undertaken on this form, please contact the IRP Project Team Administrator at 1 888 747-4832.

For further information or to submit your feedback form:

BC Hydro Integrated Resource Plan
 Email: integrated.resource.planning@bchydro.com
 Web: bchydro.com/irp
 Mailing Address:
 P.O. Box 2850
 Vancouver, B.C. V6B 3X2

- **ALTERNATIVE TECHNOLOGIES** Non-conventional electricity generation methods such as fuel cells, tidal current, solar, wind and wave energy sources.
- **ATTRIBUTE** A characteristic that describes a resource option or portfolio, used to assess its performance in meeting the planning objectives.
- **BASE LOAD** An amount of electricity committed or available over a period of time at a steady rate.
- **BLACKOUT** Loss of all electrical load in a given area.
- **BC TRANSMISSION CORPORATION (BCTC)** The Crown corporation created by the government of B.C. in 2003 to plan, operate and maintain BC Hydro's high-voltage transmission system. The 2010 *Clean Energy Act* consolidated BC Hydro and BC Transmission Corporation.
- **BC UTILITIES COMMISSION (BCUC)** An independent regulatory agency of the provincial government operating under and administering the *Utilities Commission Act*. The BCUC regulates BC Hydro's domestic supply and rates and the safety and reliability of the BC Hydro system, as well as operating, management and administrative costs, and also assesses concerns from ratepayers regarding BC Hydro's service.
- **BULK TRANSMISSION** The transfer of electricity on the major high-voltage transmission system that carries the majority of power from the generators to the lower-voltage distribution systems.
- **CAPACITY** The instantaneous power output or electricity demand at any given time, normally measured in kilowatts (kW) or megawatts (MW). A transmission facility's ability to transmit electricity at any instant.
- **CLEAN OR RENEWABLE ENERGY** is defined by the *Clean Energy Act* as including biomass, biogas, geothermal heat, hydro, solar, ocean, wind or other prescribed resources.
- **COGENERATION** The simultaneous production of electrical or mechanical energy and useful heat energy from a single fuel source.
- **COLUMBIA RIVER TREATY** A treaty signed in 1961 between Canada and the U.S. that enabled storage reservoirs to be built and operated in British Columbia to regulate Columbia River flows to the U.S. for power production and flood control.
- **CONSERVATION** Reducing the level of energy service to reduce energy consumption. For example, turning off unused lights.
- **CURTAILMENT** A reduction in demand as a result of demand-side management.
- **DEMAND** Customers' requirement for electric power.
- **DEMAND-SIDE MANAGEMENT** Actions, programs and initiatives aimed at modifying or reducing energy consumption through conservation, energy efficiency and distributed generation.
- **DEPENDABLE CAPACITY** The amount a plant can reliably produce when required, assuming all units are in service, measured in megawatts (MW). Factors external to the plant affect its dependable capacity. For example, steamflow conditions can restrict the dependable capacity of hydro plants and fuel supply constraints can impact thermal plant dependable capacity. Planned and forced outage rates are not included. The dependable capacity used for long-term planning is the maximum capacity that a plant/unit can reliably provide for three hours in the peak load period of week days during two continuous weeks of cold weather.
- **DISPATCHABLE** A resource whose output can be adjusted to meet various conditions including fluctuating customer demand, weather changes, outages, market price changes and non-power considerations.
- **DISTRIBUTION SYSTEM** Electrical lines, cables, transformers and switches used to distribute electricity over short distances from substations to the customer, generally at voltages lower than 69 kV.
- **EFFICIENCY** The effective rate of conservation of a natural resource (e.g., electricity) to usable energy; the effective rate of conversion of electricity to an end use (e.g., heating).
- **ELECTRICITY** is a type of energy fuelled by the transfer of electrons from positive and negative points within a conductor.
- **ELECTRICITY PURCHASE AGREEMENT (EPA)** The contract that defines the terms and conditions by which BC Hydro purchases electric energy from Independent Power Producers.
- **EMERGING TECHNOLOGIES** Technology at the first stages of development or demonstration. Not readily available in commercial markets and not in commercial use, as evidenced by at least three generation plants generating energy for a period of not less than three years, to a standard of reliability generally required by good utility practice.
- **ENERGY** The amount of electricity produced or used over a period of time, usually measured in kilowatt hours, megawatt hours and gigawatt hours.
- **ENERGY CAPABILITY** is the amount of energy that can be generated under specified conditions by a generating unit or by the electric system over a period of time, typically expressed in GWh/year.
- **FIRM ENERGY** refers to electricity that is available at all times. Resources typically providing firm energy include large hydroelectric dams, bioenergy, geothermal and natural gas.
- **GREEN ENERGY** Energy produced from a green power project. BC Hydro uses the EcoLogo standard to determine green projects.
- **GREENHOUSE GASES (GHG)** Gases that contribute to global climate change, or the "greenhouse effect," including carbon dioxide (CO₂), carbon monoxide (CO) and methane (CO₄).
- **GRID** A network of distribution or transmission lines.
- **GWh** stands for gigawatt hour, a unit of electrical energy equal to one billion watt hours.
- **HERITAGE CONTRACT** A 49,000 gigawatt hour per year contract between BC Hydro's generation and distribution lines of business to ensure BC Hydro customers benefit from the existing low-cost hydroelectric and thermal resources in the BC Hydro system.
- **INDEPENDENT POWER PRODUCER (IPP)** A non-utility-owned electricity-generating facility that produces electricity for sale to utilities or other customers.
- **INTEGRATED RESOURCE PLAN** The document describing BC Hydro's long-term plan to meet customers' needs using existing and new resources and demand side management.
- **INTEGRATED SYSTEM** An interconnected network of transmission lines, distribution lines and substations linking generating stations to one another and to customers throughout a utility's service area. Excludes customers located in remote locations who are connected via non-integrated generating plants.
- **INTERMITTENT** Electricity supply that fluctuates or is not available at all times. For example, wind energy only produces power when the wind is blowing.
- **LARGE HYDRO (SITE C)** Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C.
- **LOAD** The amount of electricity required by a customer or group of customers.
- **LOAD FORECAST** The expected amount of electricity required to meet customer needs in future years.
- **MW** stands for megawatt, a unit of electrical power equal to one million watts.
- **OUTAGE** A planned or unplanned interruption of one or more elements of an integrated power system.
- **PEAK CAPACITY** The maximum amount of electrical power that generating stations can produce in any instant.
- **PEAK DEMAND** The maximum instantaneous demand on a power system. Normally, the maximum hourly demand.
- **PORTFOLIO** A group of individual resource options to be acquired in a sequence over time to fill customers' future electricity needs.
- **POWER** The instantaneous rate at which electrical energy is produced, transmitted or consumed, typically measured in watts, kilowatts (kW), or megawatts (MW).
- **POWER SMART** BC Hydro's demand-side management initiative to encourage energy efficiency by its customers. Originally launched in 1989, Power Smart includes a full range of DSM programs aimed at BC Hydro's residential, commercial and industrial customers.
- **RATE** Term used for a utility's unit price of service.
- **RATE STRUCTURE** Represents the set of rates paid by a class of customers (e.g., residential) for use of electricity.
- **REINFORCEMENT** Improvements in the transmission system to maintain or increase reliability and security of supply.
- **RELIABILITY** A measure of the adequacy and security of electric service. Adequacy refers to the existence of sufficient facilities in the system to satisfy the load demand and system operational constraints. Security refers to the system's ability to respond to transient disturbances in the system.
- **RESERVE** System generating capacity beyond that required to meet peak demand, ensuring sufficient generation is available if some generating units are not available; necessary to meet reliability criteria for planning and operation.
- **RESERVOIR STORAGE** The volume available in a reservoir to hold water for power generation or flood control.
- **RESOURCE OPTION** A source of electricity that is available to help meet or reduce electricity demand, including generation, purchases, demand-side management and transmission facilities.
- **RUN-OF-RIVER** A hydroelectric facility that operates with no significant storage facilities.
- **SCENARIO ANALYSIS** A set of planning assumptions to test the long-term performance of a portfolio.
- **TRANSMISSION SYSTEM** Electrical facilities used to transmit electricity over long distances, usually at voltages greater than 69 kV.
- **VOLTAGE** The strength of electromotive force (EMF).

For more information, please visit: bchydro.com/irp

You can also provide feedback and learn more about the Integrated Resource Plan by:

- Attending a public open house: bchydro.com/irp
- Online feedback form: bchydro.com/irp
- Written submissions: integrated.resource.planning@bchydro.com or P.O. Box 2850, Vancouver, B.C. V6B 3X2
- Toll-free phone: 1 888 747-4832

Integrated Resource Plan





DRAFT INTEGRATED RESOURCE PLAN 2012

FEEDBACK FORM INSIDE!

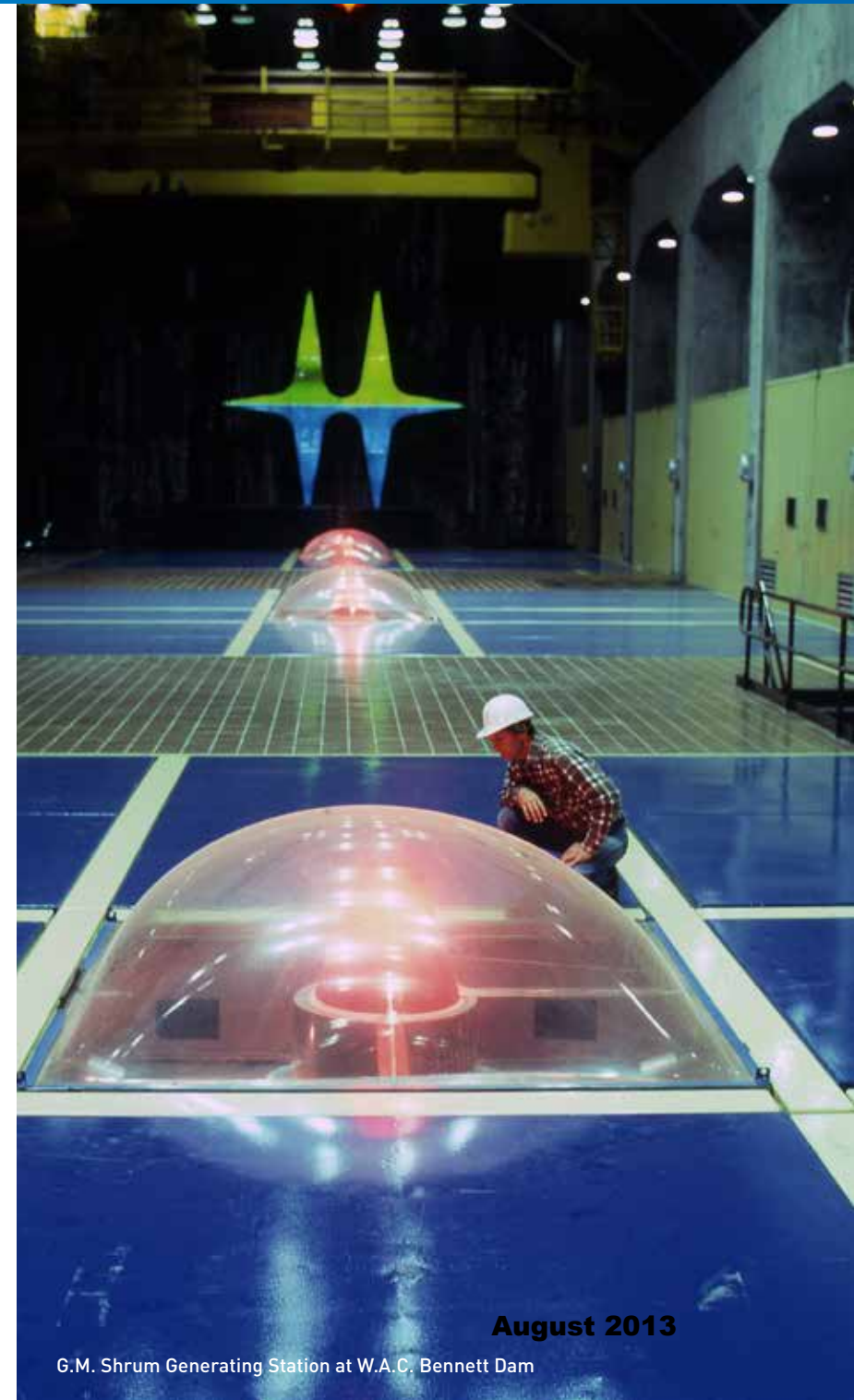
A PLAN TO MEET B.C.'S FUTURE ELECTRICITY NEEDS CONSULTATION DISCUSSION GUIDE & FEEDBACK FORM MAY 28 TO JULY 6, 2012

No single factor explains the comfort and quality of life in the 21st century as well as our ability to enlist external forms of energy to do work for us. From the alarm that wakes us in the morning to the tools that animate our lives, almost everything we touch is either powered by — or has been created, changed or moved by — some form of energy. British Columbia has a particular wealth of electricity resources. Colourless, odorless, safe and instantly available, clean electricity is also endlessly renewable.

But while it arrives at the flick of a switch, electrical energy cannot be mustered with the snap of your fingers. The electricity that heats our homes, lights our streets and powers our industries is generated in many regions of the province and delivered over thousands of kilometres of transmission and distribution lines. Along the way, it is measured and adjusted, moment by moment, to meet the changing needs of all British Columbians. Put too much electricity into the system and it will overload and crash; too little and the entire economy could grind to a halt.

Given the long lead time necessary to build new power generation facilities and transmission infrastructure, BC Hydro must plan well into the future to ensure a continued flow of clean, safe, reliable and cost-effective electricity.

This draft Integrated Resource Plan (IRP) describes the actions BC Hydro recommends to meet growing demand so that our customers will continue to receive affordable, clean and reliable electricity. The draft Plan includes consideration of the most recent changes in the electricity demand forecast and reflects input gathered in 2011 from First Nations, stakeholder and public consultation. Once again, we are interested in your feedback.





G.M. Shrum Generating Station at W.A.C. Bennett Dam

TABLE OF CONTENTS

WE WANT TO HEAR FROM YOU	2
ABOUT BC HYDRO	3
CONSULTATION 2011	4
THE INTEGRATED RESOURCE PLAN	5
FORECAST DEMAND: HOW MUCH ELECTRICITY WILL BRITISH COLUMBIANS NEED OVER THE NEXT 20 YEARS?	6
WHAT IS THE GAP BETWEEN EXISTING SUPPLY AND FORECAST DEMAND?	8
THE DRAFT INTEGRATED RESOURCE PLAN: HOW CAN BC HYDRO CLOSE THE ELECTRICITY GAP? CONSERVE MORE.	9
BUILD AND REINVEST MORE	10
BUY MORE	12
PREPARE FOR POTENTIALLY GREATER DEMAND	17
FEEDBACK FORM	18
	23

WE WANT TO HEAR FROM YOU

This discussion guide is offered to First Nations, stakeholders and the public as an overview of BC Hydro’s draft Integrated Resource Plan (IRP) — including the key actions that BC Hydro proposes for meeting electricity demand over the long term. BC Hydro is seeking feedback on major aspects of the draft plan.

Electricity systems are inherently complex and capital-intensive, and generally require significant lead time to construct. It can take five to six years to plan and build a new generation facility and even longer to develop transmission lines and infrastructure. So, BC Hydro must plan carefully to determine the least-cost options and keep rates affordable, to encourage conservation, and to acquire the right mix of generation and transmission resources to meet its customers’ needs.

In the process of preparing the draft, BC Hydro considered input from First Nations, stakeholder and public consultations conducted in March and April 2011. Now, BC Hydro is seeking feedback on this draft plan. Consultation will take place **May 28 to July 6, 2012**. BC Hydro will also be holding separate workshops for First Nations.

Consultation materials are on the BC Hydro website at bchydro.com/irp. You can provide feedback and learn more by:

- Reading more background information available online
- Completing an online feedback form
- Participating in open houses
- Participating in a webinar
- Viewing the IRP video
- Writing comments to BC Hydro

HOW YOUR FEEDBACK WILL BE USED

BC Hydro will consider feedback received through this consultation, along with technical, financial, environmental and economic development inputs, when preparing a final IRP. The plan will be submitted to the provincial government by December 2012, after which government will review the plan and decide whether to approve it.



PUBLIC OPEN HOUSES

Community	Date	Time	Location
Prince George	Tuesday, June 5	6:00 – 9:00 p.m.	Ramada Hotel Prince George
Fort St. John	Wednesday, June 6	6:00 – 9:00 p.m.	Quality Inn Northern Grand Hotel
Vancouver	Tuesday, June 12	6:00 – 9:00 p.m.	SFU Harbour Centre
Terrace	Thursday, June 14	6:00 – 9:00 p.m.	Best Western Plus Terrace Inn
Victoria	Wednesday, June 20	6:00 – 9:00 p.m.	Hotel Grand Pacific
Webinar	Monday, June 25	12:00 noon	bchydro.com/irp *
Webinar	Tuesday, June 26	12:00 noon	bchydro.com/irp *

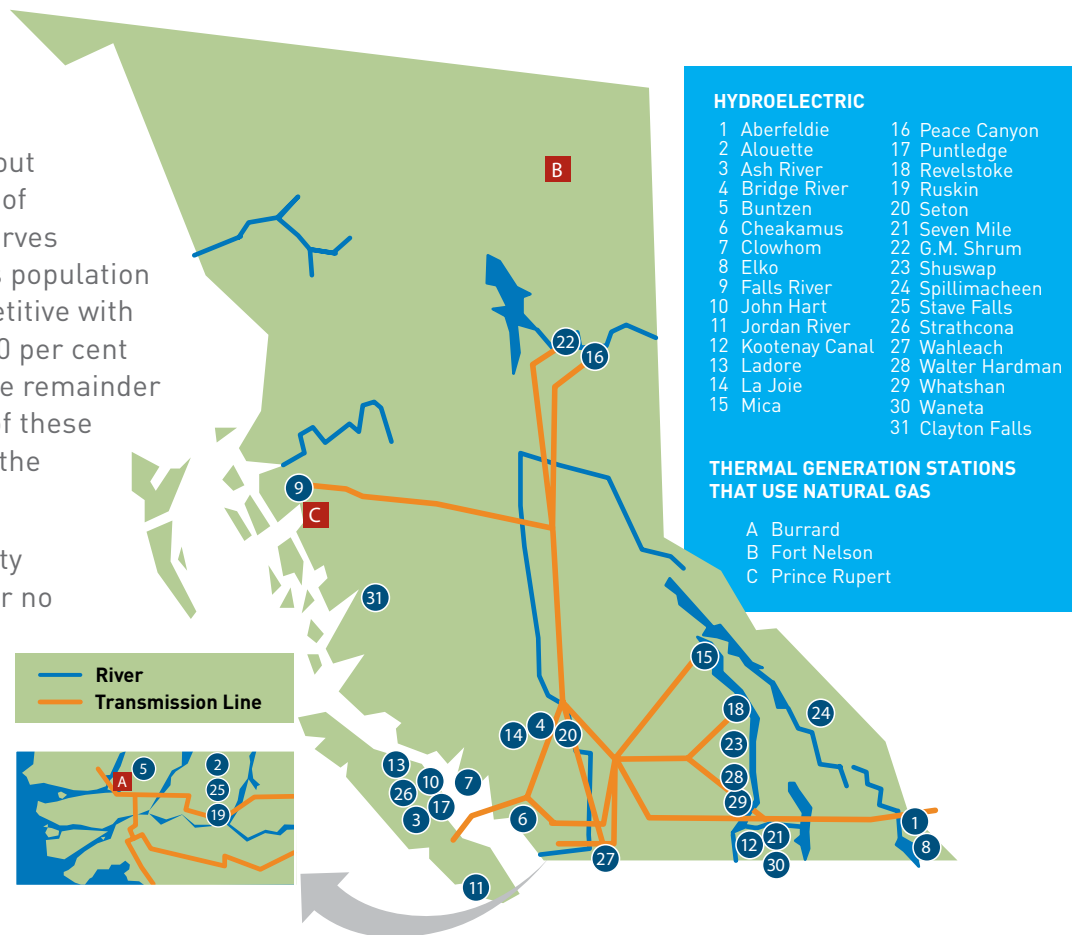
*Please check bchydro.com/irp for further information.

ABOUT BC HYDRO

Fifty years ago, the Province of B.C. created a Crown-owned utility to plan, develop and deliver clean and reliable electricity to homes and businesses throughout most of the province. Today, BC Hydro is one of the largest electrical utilities in Canada. It serves 1.8 million customers — 95 per cent of B.C.'s population — safely, reliably and at rates that are competitive with jurisdictions across North America. Nearly 90 per cent of customer accounts are residential, with the remainder either commercial or large industrial. Each of these three groups consumes roughly one-third of the total electricity supplied.

More than 93 per cent of BC Hydro's electricity supply is clean or renewable, creating little or no greenhouse gas emissions. This energy comes from a combination of BC Hydro's own existing resources and from power purchased from independent power producers who generate electricity from a range of resources.

As the map shows, BC Hydro operates 31 hydroelectric facilities and three thermal generation plants that use natural gas. The major hydroelectric facilities are located in the Peace and Columbia regions.



More than 70 independent power producers also connect to the grid, contributing approximately 20 per cent of the total electrical supply. The transmission system also connects to Alberta and to Washington state, enabling BC Hydro to trade electricity for the benefit of BC Hydro ratepayers.

PROVINCIAL ENERGY GOALS

BC Hydro's mandate is to provide British Columbians with reliable and affordable electricity. As a Crown-owned utility, it is governed by the *Hydro and Power Authority Act* and regulated by the British Columbia Utilities Commission under the *Utilities Commission Act*.

The provincial *Clean Energy Act* requires BC Hydro to submit an Integrated Resource Plan to the Minister of Energy by December 2012 and every five years thereafter. The Act also requires BC Hydro to be self-sufficient* by 2016 and to describe how it will respond to objectives in the Act including:

- Generate and deliver at least 93 per cent of all electricity in British Columbia through clean or renewable sources.
- Keep rates among the most competitive in North America.
- Meet at least 66 per cent of any increase in demand through conservation and efficiency by 2020.
- Use renewable power to help achieve provincial greenhouse gas reduction targets.
- Encourage economic development and the creation and retention of jobs.
- Explore and, subject to cabinet approval, pursue the opportunity to develop and sell clean electricity into interprovincial and international markets.
- Foster the development of First Nations and rural communities through the use and development of clean or renewable resources.

* In February 2012, government amended the definition of self-sufficiency so that BC Hydro must be self-sufficient during average water conditions. The previous definition had required self-sufficiency during historically low inflows or critical water conditions.

PUBLIC, STAKEHOLDER AND FIRST NATIONS CONSULTATION 2011

During March and April 2011, BC Hydro sought input from First Nations, stakeholders and the public as it developed the information and conducted the analysis necessary to prepare the draft Integrated Resource Plan (IRP). During consultation, more than 700 stakeholders and members of the public attended stakeholder meetings and open houses. Participants completed 400 feedback forms and made 52 written submissions. At the same time, BC Hydro held nine First Nations regional workshops that were attended by 121 participants representing 78 First Nations, tribal councils and Aboriginal organizations. BC Hydro also sought input from the IRP Technical Advisory Committee on its analysis.

For more information about the IRP Consultation program and reports summarizing the input received to date, go to bchydro.com/irp.



THE INTEGRATED RESOURCE PLAN

The Integrated Resource Plan (IRP) is BC Hydro’s plan for acquiring the resources to meet customer needs over the long term. But this is not a once-every-20-years exercise. BC Hydro will update its long-term electricity plan at least once every five years. As part of this process, BC Hydro asks three questions:

1. HOW MUCH ELECTRICITY WILL BRITISH COLUMBIANS NEED OVER THE NEXT 20 YEARS?

This depends on a host of factors that increase or decrease demand. That demand must also be understood in two ways: how much energy is required in total over the course of a year, and how much capacity might be needed to meet demand peaks, such as seasonal and daily peaks — to ensure that BC Hydro can keep the lights on, even on the coldest, darkest days.

2. WHAT IS THE GAP BETWEEN EXISTING SUPPLY AND FORECAST DEMAND?

What is the expected output of BC Hydro’s existing electricity generation, contracted energy supply and transmission assets, and to what degree might conservation and efficiency measures reduce future demand? After conservation measures are taken into account, what is the gap between existing supply and anticipated demand?

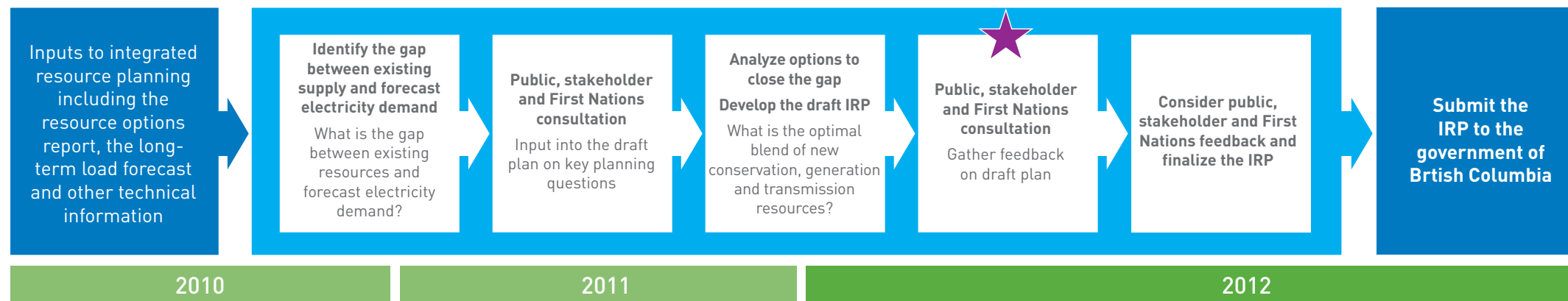
3. HOW CAN BC HYDRO CLOSE THE ELECTRICITY GAP?

What blend of additional conservation measures and additional generation and transmission resources will be needed to meet demand, reliably and cost-effectively?

By addressing these questions, BC Hydro identifies actions it must take within the next 10 years to meet its customers’ future long-term electricity needs.

BC Hydro’s Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects.
Recommended action items will be subject to subsequent approval and consultation requirements.

WHERE WE ARE TODAY



FORECAST DEMAND: HOW MUCH ELECTRICITY WILL BRITISH COLUMBIANS NEED OVER THE NEXT 20 YEARS?

Approximately one-third of BC Hydro’s current electricity demand comes from residential customers, another third from commercial and small industrial customers (e.g., hospitals, schools and shopping malls) and the final third from large customers (e.g., pulp mills, mines). Changes in any one of these customer segments can have significant impacts on the overall growth in electricity demand.

20-YEAR ANNUAL ENERGY LOAD FORECAST

To ensure that it has sufficient energy to meet future demand, BC Hydro establishes a probable forecast of how much customers will need per year (the red line, below right).

It also calculates the potential for higher and lower demand (the grey area around the red line). The green line indicates the anticipated demand, reduced by savings from BC Hydro’s existing conservation and efficiency plans.

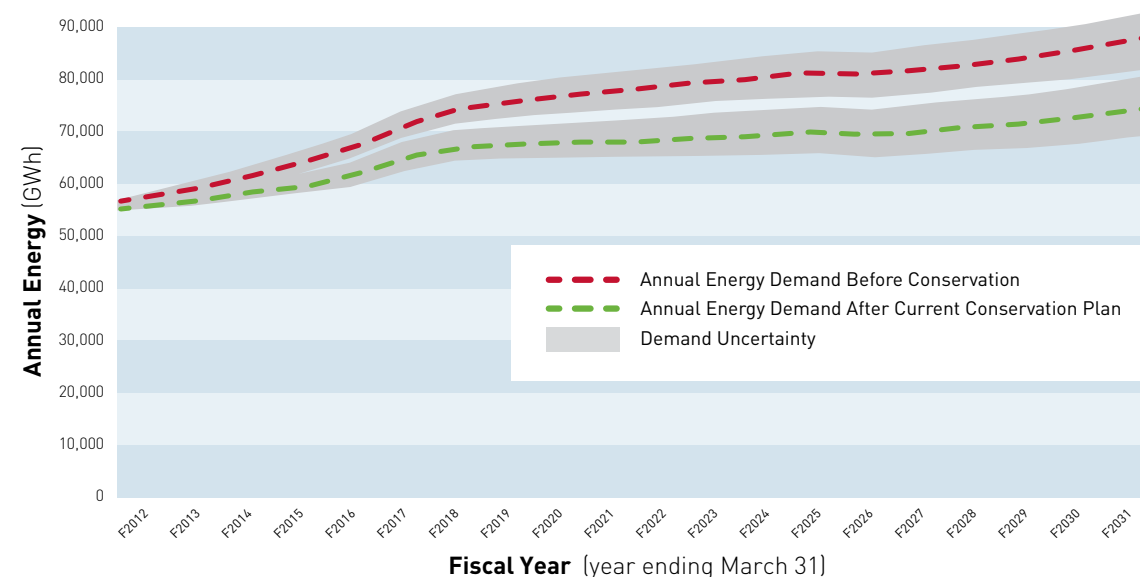
In its December 2011 load forecast, BC Hydro anticipated that growth in demand from the mining and oil and gas sectors will be particularly strong. BC Hydro has included the development of two new Liquefied Natural Gas facilities proposed for the north coast of the province in the demand represented in the graph below.

The long-term load forecast shows that demand for energy could grow by approximately 50 per cent over the next 20 years, before accounting for the savings that can be achieved by conservation and efficiency measures.

While growth in population and general economic activity are relatively predictable drivers of electricity demand, it is more difficult to forecast growth in demand among large industrial customers, as this is subject to the fluctuating global market for B.C.’s natural resources.

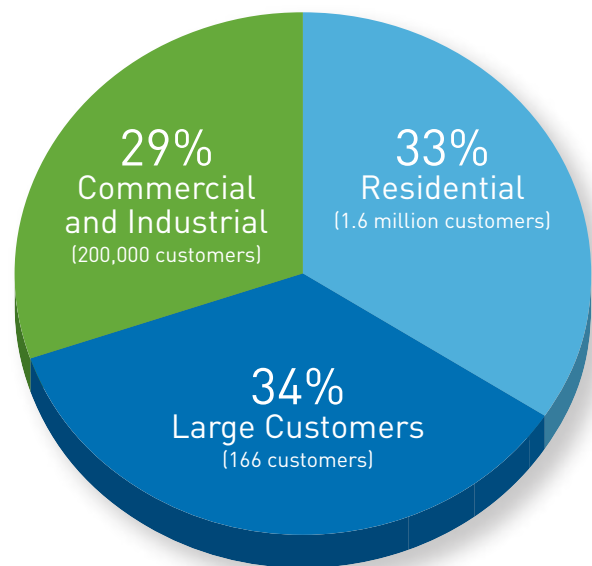
To manage uncertainty, BC Hydro is concentrating on its most probable forecast, but is continuing to work with government and customers to manage scenarios that reflect potential additional demand.

ANNUAL ENERGY FORECAST



Source: BC Hydro December 2011 Long-Term Load Forecast

ENERGY is the amount of electricity produced or used over a period of time measured in gigawatt hours (one gigawatt hour equals one million kilowatt hours). The average British Columbian household uses 11,000 kilowatt hours per year.



Electricity demand in the above pie chart does not include sales to other utilities and BC Hydro’s own electricity use.

20-YEAR PEAK CAPACITY FORECAST

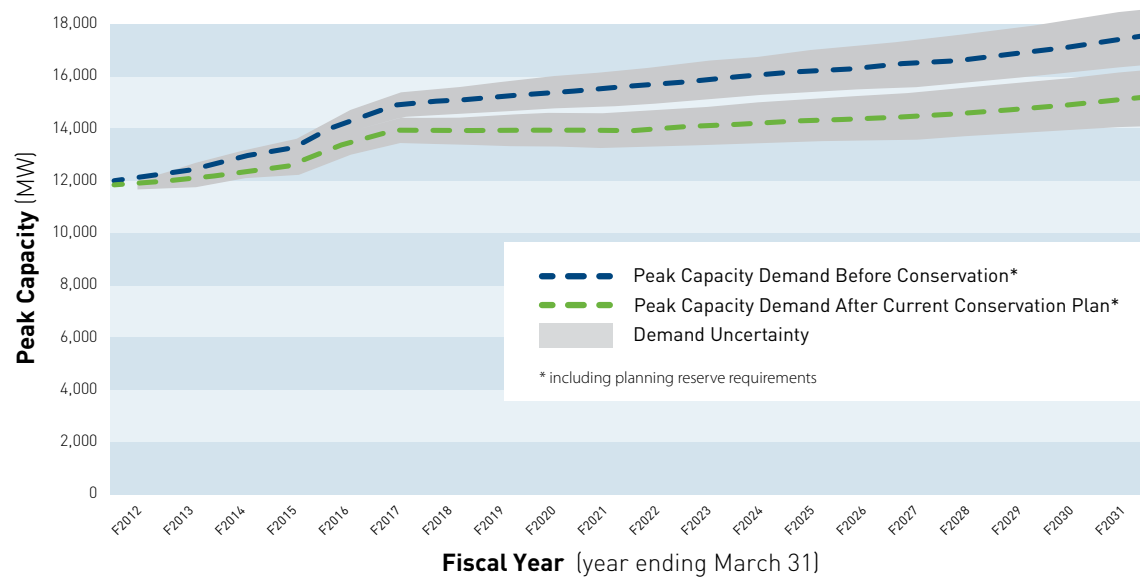
In addition to examining the total energy that BC Hydro customers need in a year, BC Hydro must also ensure that it has sufficient peak capacity to meet the moment-by-moment demands placed on its system.

BC Hydro's load forecast indicates that peak capacity demand will grow by approximately 50 per cent over the next 20 years, before accounting for the savings that can be achieved by conservation and efficiency measures.

Demand for electricity varies through the year. In British Columbia, the peak demand typically occurs in the early evening in December or January on a very cold weekday.

In the graph below, the blue line represents the projected peak capacity demand before conservation is taken into account; the green line shows the peak demand including the conservation and efficiency levels that BC Hydro believes can be delivered based on existing plans. The grey area shows the demand uncertainty.

PEAK CAPACITY FORECAST



Source: BC Hydro December 2011 Long-Term Load Forecast

PEAK CAPACITY refers to the maximum amount of electricity that BC Hydro can supply at any one time throughout the whole province. For example, BC Hydro's system experiences seasonal and daily peaks in demand.

ELECTRIFICATION: SWITCHING FROM OTHER FUELS TO ELECTRICITY

The *Clean Energy Act* seeks "to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia."



Fuel switching to clean electricity could occur across the economy. The Horn River Basin is one example of potential "electrification" – traditionally, industry burned fossil fuels to power their industrial processes; now they are considering electricity. The transportation sector is another example – switching automobiles from gasoline and diesel to electricity could help reduce the largest source of greenhouse gas emissions in B.C.

Within the IRP, BC Hydro has examined the drivers of electrification, the potential impact of electrification on the system, and when electrification might occur. Analysis shows that future carbon prices (including the regulated cost of emitting greenhouse gases) would have the strongest influence on the speed with which the transportation and industrial sectors will switch fuels and electrify. In the next 10 years, demand for electric vehicles is predicted to be relatively small, due to the availability and cost of vehicles. In the long term, electric vehicles could become a significant component of overall electricity demand and a source of distributed energy storage. BC Hydro will continue to monitor carbon prices and analyze potential system demand to accommodate fuel switching as the marketplace transitions.

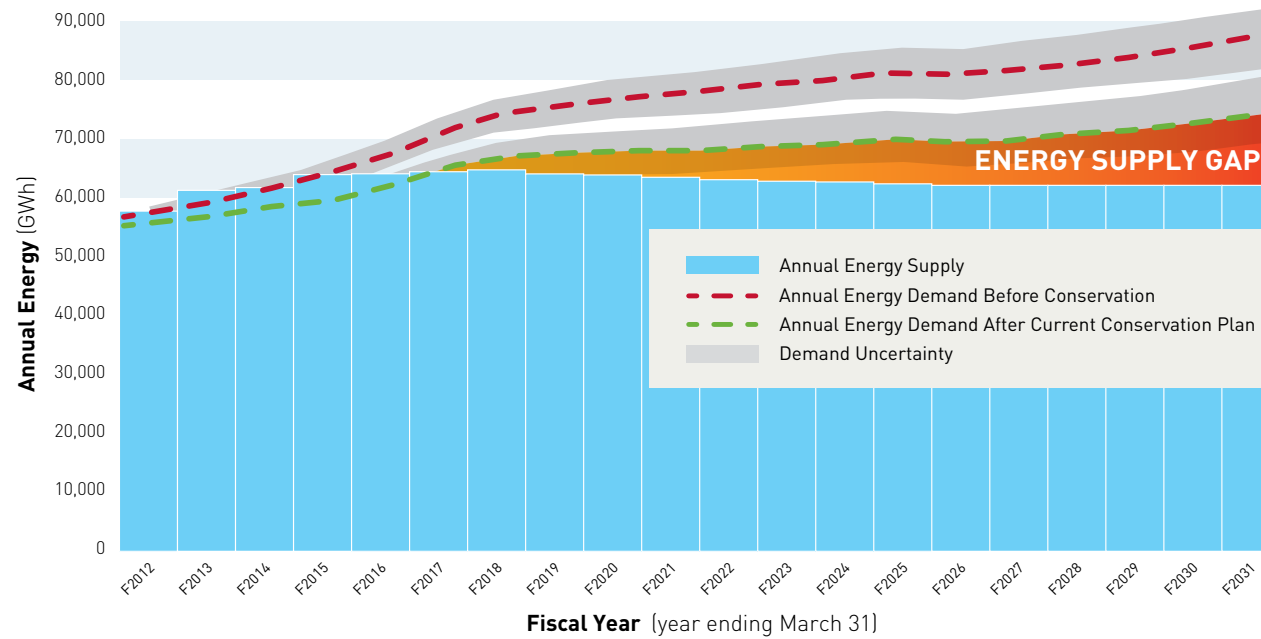
WHAT IS THE GAP BETWEEN EXISTING SUPPLY AND FORECAST DEMAND?

A key step in long-term integrated resource planning involves comparing the energy and capacity load forecast (demand) to currently available resources (supply). When forecast demand exceeds current supply, BC Hydro must fill the gap by encouraging consumers to use less and by increasing the sources of electricity supply.

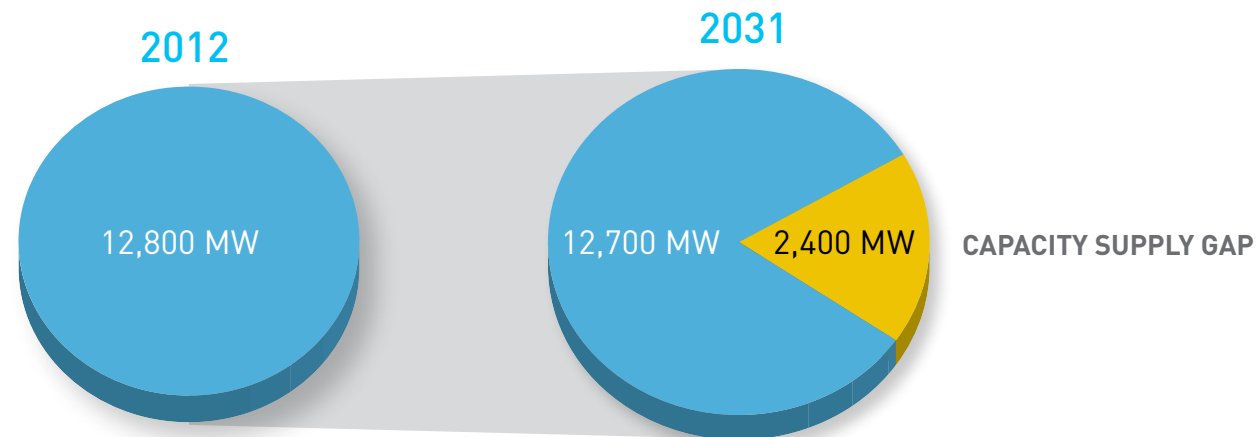
In BC Hydro’s energy supply-demand outlook (right) the blue bars show the current annual supply of BC Hydro facilities and independent power producers. The bars increase over the next three years, reflecting BC Hydro’s own operating plans and the new independent power production that is coming online. Beyond 2018, the net energy supply goes down as contracts with some independent power producers expire. BC Hydro must fill the gap between the blue bars (the existing supply) and the green line (showing anticipated demand, as reduced by conservation and efficiency measures).

Meanwhile the capacity outlook indicates that customers will need an additional 2,400 megawatts of peak capacity by 2031.

THE FORECAST ENERGY GAP



THE FORECAST CAPACITY GAP (AFTER CURRENT CONSERVATION PLAN AND BEFORE IRP ACTIONS)



The decrease in capacity from 2012 to 2031 is due to some biomass-based Independent Power Producer contracts going off-line.

THE DRAFT INTEGRATED RESOURCE PLAN: HOW CAN BC HYDRO CLOSE THE ELECTRICITY GAP?

The draft Integrated Resource Plan describes the actions that BC Hydro proposes to take over the next 10 years to ensure British Columbians continue to receive low-cost, reliable electricity over the long term.

To evaluate the different options and identify the appropriate mix of resources, BC Hydro has considered the following factors:

- **Technical specifications:** the potential peak capacity and energy each resource option offers, its earliest possible in-service date, etc.
- **Cost**
- **Effect on provincial energy objectives:** e.g., the objective that at least 93 per cent of energy should come from clean or renewable sources, at least 66 per cent of any increased demand be met by conservation by 2020, and greenhouse gas emissions be reduced, etc.
- **Environmental attributes:** land, water and air footprints of projects that BC Hydro believes can be permitted.
- **Economic development attributes:** contributions to jobs, GDP and provincial revenue.
- **First Nations, stakeholder, public and Technical Advisory Committee** input gathered through the 2011 consultation process.

On the following pages, BC Hydro recommends a set of actions to close the gap. It involves:

- **CONSERVING MORE**
- **BUILDING AND REINVESTING MORE**
- **BUYING MORE**

In addition, BC Hydro must also develop contingency plans to address the “what ifs” such as what if demand grows more quickly than expected. BC Hydro has additional recommendations to:

- **PREPARE FOR POTENTIALLY GREATER DEMAND**



420 of 759

FINDING THE RIGHT MIX

Electricity sources can be divided into two categories: dependable capacity and intermittent energy.

Dependable capacity resources, such as large hydro reservoirs and generating stations, pumped storage facilities and natural gas-fired generators, all deliver a consistent, dependable amount of power over time.

Intermittent energy resources, such as wind, solar, run-of-river hydro, and tidal and wave energy, deliver power only when the wind is blowing, the sun is shining or the water is flowing.

The challenge for electric utilities is to deliver a reliable supply of electricity and operate with an appropriate balance of cost-effective, dependable capacity and intermittent renewable resources to minimize environmental impacts.

BC Hydro has many dependable capacity resources in the form of water stored behind its dams on the Peace and Columbia River systems, which can be used when needed. However, as B.C.'s capacity needs have grown over the years, BC Hydro is now having to look at new additional capacity solutions to ensure customers have energy when they need it.



August 2013

➤ CONSERVE MORE

REDUCE ENERGY CONSUMPTION

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➤ **RECOMMENDED ACTION #1: CONSERVE MORE:**

a) Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

b) Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours.

.....

Conservation and efficiency, also referred to as demand-side measures (DSM), is the cleanest and least expensive way for BC Hydro to reduce the gap between future electricity demand and existing resources.



Conservation measures can include:

- Programs that provide information, education and incentives (for example, the BC Hydro Fridge Buy-Back Program).
- Specifically designed electricity rates such as the existing residential inclining block rate that encourages conservation while collecting no additional revenue for BC Hydro.
- Government codes and standards that set minimum energy performance levels for products or systems that use, control or affect the use of energy — for example, by eliminating the sale of low-efficiency light bulbs.

BC Hydro’s current conservation and efficiency plan, established in 2008, aimed to reduce current levels of consumption by 8,800 gigawatt hours per year by 2020.

In analyzing how efficiency can be improved and how much energy can be conserved over a 20-year horizon, BC Hydro compared its current approach, which emphasizes a complementary mix of programs, rates and government codes and standards, against a more aggressive approach, which would rely more on government-regulated codes and standards as well as other conservation measures. This more aggressive approach would require a shift in how British Columbians use electricity — for example, new housing would need to be built more efficiently. Mandatory time of use rates would not be part of this approach, as the government has directed BC Hydro not to introduce them.

In determining how much conservation and efficiency it should recommend, BC Hydro considered:

- How much energy savings is BC Hydro confident will be delivered? (Conservation levels are uncertain because they depend upon customers adopting new behaviours and technologies.)
- At what cost can savings be achieved?
- What has been the consultation input to date?

The recommended approach will provide BC Hydro with the time needed to learn more about customers’ willingness to accept new codes and standards. Depending on results, the conservation target could be increased even more in the next Integrated Resource Plan (IRP).

By targeting 9,800 gigawatt hours per year, BC Hydro expects to defer about 78 per cent of incremental demand for traditional energy loads. This target is in excess of B.C.’s *Clean Energy Act* objective to meet 66 per cent of new demand for electricity through conservation.





ENCOURAGE LESS CONSUMPTION DURING PERIODS OF PEAK DEMAND

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➤ **RECOMMENDED ACTION #2:** Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.
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In addition to conservation measures that target total energy savings over the course of a year, BC Hydro will improve voluntary programs designed to reduce peak demand or shift demand away from peak hours. For example, BC Hydro can work with large industrial customers to adjust their processes and equipment operations in a way that reduces consumption for short periods when needed.

For more information about BC Hydro’s Power Smart programs, go to bchydro.com/powersmart.



► BUILD AND REINVEST MORE

While conservation is the first and preferred strategy to meet customers' future electricity needs, made-in-B.C. power is still required to fill the gap between existing supply and anticipated demand — for both the total amount of energy used in the course of a year and for the peak capacity needed during times of maximum consumption.

Over the last 30 years, British Columbians have been able to rely on the total energy and peak capacity that was created when BC Hydro built the large dams, reservoirs and generating stations on the Peace and Columbia river systems. BC Hydro has been able to meet rising peak demand by adding generating units and making other improvements to the existing generating stations on the Peace and Columbia to take maximum advantage of the energy storage capabilities of their reservoirs.

Now that this infrastructure is nearing its maximum potential, BC Hydro will need to seek other solutions to meet growing needs. One of the objectives of the *Clean Energy Act* is that at least 93 per cent of B.C.'s electricity comes from clean or renewable sources. Run-of-river hydro and wind generation can fill some of this demand, but these are intermittent sources and therefore are not solutions when needing reliable peak capacity.

BUILD THE SITE C CLEAN ENERGY PROJECT

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► RECOMMENDED ACTION #3: Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown's duty to consult and, where appropriate, accommodate Aboriginal groups.

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The Site C Clean Energy Project is a proposed third dam and hydroelectric generating station on the Peace River, downstream from the existing BC Hydro reservoirs and the G.M. Shrum and Peace Canyon generating stations.

In preparing the Integrated Resource Plan, BC Hydro compared the efficiency, environmental attributes and cost of Site C against other renewable resources (wind, run-of-river hydro) that could meet the same annual energy and peak capacity requirements in the same time frame. BC Hydro also compared Site C against other peak capacity options, including natural gas and pumped storage. The analysis generally showed the following:

- Portfolios of resource options with Site C would have lower costs to ratepayers and would provide additional flexibility to integrate intermittent renewable resources.
- Portfolios that include Site C would generally have a greater footprint on land, with the creation of a new reservoir, although portfolios excluding Site C would require a greater number of projects with more dispersed environmental footprints.

- As the third project on the Peace River, Site C would benefit from storage and regulation by upstream facilities. For example, Site C would generate approximately 35 per cent of the annual energy produced at the W.A.C. Bennett Dam, with five per cent of the reservoir surface area.
- Portfolios including Site C generally provide higher levels of GDP and employment resulting from project construction.

With a total project cost of \$7.9 billion, it would produce electricity at a cost of between \$87 and \$95 per megawatt hour at the point of interconnection.

SITE C:

- Supports the provincial clean energy, self-sufficiency and climate change objectives by providing energy and capacity with low greenhouse gas emissions intensity.
- Projected to provide 35,000 direct and indirect jobs, supporting the provincial objective of encouraging economic development and job creation.
- Facilitates the development of wind and run-of-river hydro that require backup from a dependable and flexible resource.



Artist's rendering of the proposed Site C Dam



Maintenance of the G.M. Shrum Generating Station at W.A.C. Bennett Dam

SITE C PUBLIC, STAKEHOLDER AND ABORIGINAL CONSULTATION

Site C is currently in the environmental and regulatory review stage, which includes a co-operative federal and provincial environmental assessment process, including a joint review panel. The environmental assessment process for Site C will include multiple opportunities for participation by the public, Aboriginal groups, governments and other interested stakeholders.

Separate from consultation opportunities led by the regulatory agencies as part of the environmental assessment, BC Hydro is leading several streams of public and stakeholder consultation.

The streams of BC Hydro-led consultation are outlined below.

- **Government Liaison**
BC Hydro is engaging key municipal, regional and provincial government stakeholders to ensure they are kept up to date on the status of the project.
- **Property Owner Liaison**
Ongoing meetings and two-way information sharing with property owners is continuing throughout the Site C project.
- **Local Area Consultation**
BC Hydro will conduct area-specific consultations where local issues arise. For example, consultation with the community of Hudson's Hope was held in fall 2011 to gather local input about proposed berm options.
- **Aboriginal Consultation and Engagement**
BC Hydro and Aboriginal groups are engaged in a thorough consultation and engagement process that continues through all stages of the Site C Clean Energy Project.
- **Project Definition Consultation**
Project Definition Consultation is designed to consult and engage with the public and stakeholders on topics important to project planning and the environmental assessment.
 - Project Definition Consultation, Spring 2012, held between April 10 and May 31, asked the public and stakeholders for input about Highway 29 Preferred Realignment, Outdoor Recreation and the 85th Avenue Industrial Lands.
 - Project Definition Consultation, planned for fall 2012, will include consultation topics such as worker accommodation and reservoir clearing.



For more information about Site C, the work of the joint review panel and the opportunities for consultation and input, visit bchydro.com/sitec.

TAKE ADVANTAGE OF REMAINING RESOURCE SMART CAPACITY OPPORTUNITIES

BC Hydro initiated the Resource Smart program in 1988 to identify and implement efficiency gains at existing BC Hydro facilities. The program provides additional annual energy and peak capacity by modifying, updating and retrofitting our existing generation facilities. Recently, BC Hydro began the addition of the fifth and sixth generating units at Mica Generating Station. These investments will ensure that the backbone of our system remains strong and reliable.



Mica Dam

REVELSTOKE GENERATING UNIT 6

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 ► **RECOMMENDED ACTION #4:** Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.

The Revelstoke Generating Station, which was designed to accommodate six generating units, opened in 1984 with four units and a combined peak capacity of 1,980 megawatts. With the addition of a 500-megawatt fifth unit in 2010, Revelstoke now provides more than 20 per cent of BC Hydro’s total peak capacity.

A sixth turbine in the Revelstoke Generating Station would increase BC Hydro’s peak capacity, helping to ensure that electricity is available during peak hours during the coldest periods of winter.



Revelstoke Dam



W.A.C. Bennett Dam and G.M. Shrum Generating Station

PURSUE ADDITIONAL RESOURCE SMART OPPORTUNITIES

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 ► **RECOMMENDED ACTION #5:** Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro’s existing hydroelectric system.

While BC Hydro has completed a large number of Resource Smart projects over the past 20 years and has other generation refurbishment plans underway, there are still some remaining ways to modify, update and retrofit our existing generation facilities to secure additional energy and peak capacity. Upgrading the existing system through the Resource Smart projects can provide additional energy production and peak capacity on the system in a cost-effective way, with generally low or no incremental environmental impact.

COMBINE READILY AVAILABLE RESOURCES TO MEET THE SHORT-TERM CAPACITY GAP

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➤ **RECOMMENDED ACTION #6:** Fill the short-term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

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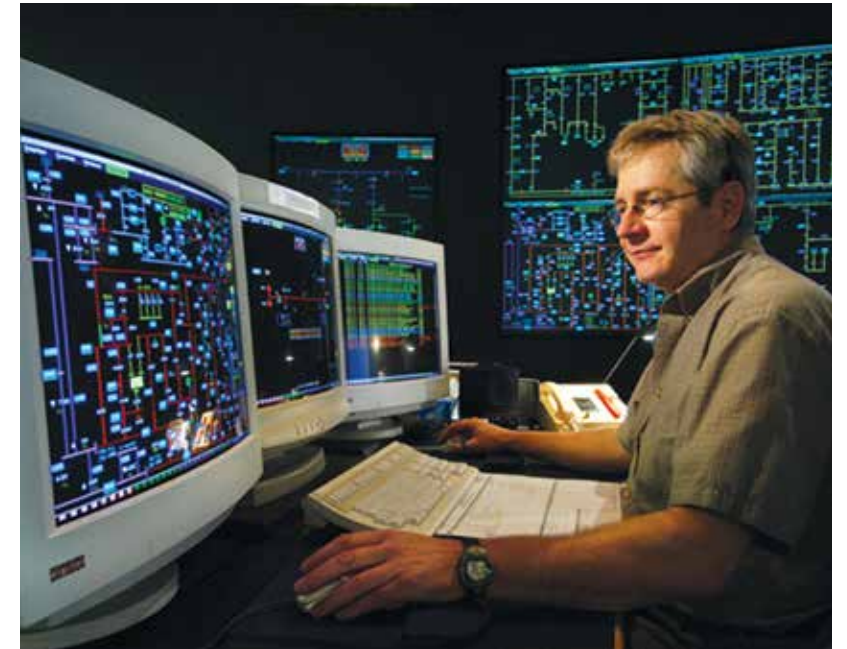
A short-term capacity gap emerges in 2015 before new projects such as Revelstoke 6 and Site C come online and provide additional peak capacity. To fill this short-term gap until alternative resources are developed, BC Hydro proposes relying on cost-effective and readily available resources to meet customers’ growing requirements.

During this gap period, BC Hydro plans to continue to purchase capacity from the marketplace via the **western electricity grid** to ensure that customers’ growing peak requirements can be met. BC Hydro considers the purchasing of out-of-province power to meet peak needs to be a prudent, low-cost choice prior to a large resource like Site C coming online.

The Canadian Entitlement is a feature of the **Columbia River Treaty** between Canada and the United States, under which Canada operates its dams on the Columbia River in a way that optimizes generating potential and regulates water flow in both countries. In return, B.C. receives an “entitlement” of one-half of the extra power produced in the U.S. The actual entitlement varies annually, but is generally about 4,600 gigawatt hours of energy per year and 1,300 megawatts of capacity.

Using the Canadian Entitlement and purchasing peak capacity on the open market involves calling upon electricity from the U.S. during periods when customers’ demand peaks. Transmission line constraints on U.S. connections are such that BC Hydro can rely on no more than 500 megawatts of additional peak capacity, which means that these options alone may be insufficient to fill the peak capacity gap.

Burrard Thermal Generating Station is a major generating facility located in the Lower Mainland and is valuable as an emergency backup resource. The plant is available with government approval to meet demand in the Lower Mainland in the event that peak demand exceeds available resources, or on an emergency basis. BC Hydro has, on average, called upon Burrard 12 days per year during the past three years to meet peak demand and to provide emergency backup for generation and transmission outages.





TRANSMISSION REQUIREMENTS

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 ► **RECOMMENDED ACTION #7:** Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.

B.C.’s bulk high-voltage transmission system is the backbone of the grid that delivers electricity to customers across the province. It carries electricity from where it is generated to the cities, towns and industrial centres where it is largely consumed. To meet expected demand, BC Hydro has concluded that no new high-voltage inter-regional transmission lines are needed in the next 20 years. However, the existing 500-kilovolt line from Prince George to Terrace will need to be reinforced to meet new demand on the north coast. Consultation and project definition studies have begun to move forward on reinforcing this line to ensure it keeps its earliest in-service date.

In addition, BC Hydro must:

- Complete committed transmission line projects, including the Interior-to-Lower Mainland (ILM) and Northwest Transmission Line (NTL).
- Address region-specific transmission needs. For example, oil and gas industry expansion is driving rapid growth in the South Peace area.

30-YEAR TRANSMISSION PERSPECTIVE

In recent years, the provincial government and utilities have become increasingly concerned about timely development of transmission infrastructure. In addition, transmission lines often require long lead times to develop (10 or more years) and rights-of-way can be difficult to secure.

Therefore, BC Hydro looked farther into the future — 30 years out — to see if a longer perspective leads to new conclusions. Extending the transmission planning horizon from 20 to 30 years validated the transmission choices identified in the initial 20-year horizon. No new transmission options were identified as a result of extending the planning horizon.

BC Hydro also considered whether pre-building new transmission would be beneficial in areas where a high number of clean generation projects were expected to be clustered in the next three decades. The analysis shows only marginal economic and environmental benefits from pre-building into areas with high generation potential in advance of need. At the same time, pre-building may also cause unnecessary environmental impacts and costs in the event the transmission need does not materialize.

BC Hydro will continue to take a proactive approach to transmission planning. In future acquisitions processes for new electricity, BC Hydro will identify potential opportunities to cluster generation facilities and avoid multiple transmission lines.

► BUY MORE

While conservation is our first and preferred strategy to meet customers' future electricity requirements, made-in-B.C. power is still required to help close the gap between supply and demand. British Columbia is fortunate to have a wealth of potential clean resources, including hydroelectricity, biomass and wind. The B.C. *Clean Energy Act* objective that at least 93 per cent of B.C.'s electricity generation comes from clean or renewable sources allows for not more than seven per cent of generation from sources such as natural gas-fired generation.

ENERGY FROM B.C.-BASED CLEAN ENERGY PRODUCERS

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► **RECOMMENDED ACTION #8:** Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2016–2018 time period.

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Final decisions on the timing and the volume of energy will be made once there is more certainty regarding projected new electricity loads.

BC Hydro has been purchasing power through long-term contracts with independent power producers for over 20 years. During fiscal 2011, independent power producers supplied 10,805 gigawatt hours of annual energy — about 20 per cent of all BC Hydro electricity requirements — while also contributing to the Province's self-sufficiency, clean energy generation, and greenhouse gas reduction objectives.

Independent clean energy producers can bring new projects online in five to six years and in smaller increments that match B.C.'s electricity demand growth. As BC Hydro's long-term forecast is updated in late 2012 and future demand is confirmed by customers, new energy can be acquired through acquisition processes involving affordable long-term contracts at fixed energy prices. Acquisitions from independent power producers also help to meet the *Clean Energy Act* objective of fostering the use and development of clean or renewable energy in First Nations and rural communities.

Based on its assessment of potential generation resources, BC Hydro expects the majority of new power will come from low-cost resources such as wind, run-of-river and biomass projects because these are currently the lowest-cost options. However, producers will have the opportunity to propose other forms of renewable power projects such as geothermal, wave and tidal for consideration.

BC Hydro plans to continue the Standing Offer Program for projects less than 15 megawatts as well as the Net Metering Program for small residential and commercial projects. BC Hydro also plans to assess and potentially expand the opportunities for geothermal resources as well as other distributed generation sources that are not participating in existing acquisitions programs.



➤ **PREPARE FOR POTENTIALLY GREATER DEMAND**

As part of good utility practice, BC Hydro must have contingency plans in case electricity requirements grow faster than forecast, or if planned resources don't come online when expected.

BC Hydro is paying particular attention to two areas of the province where there is potential for greater load growth from development in the large industrial sector. While this new demand is difficult to forecast with certainty, it warrants careful examination now because of the large volumes of energy and capacity that could be required and the unique geographic challenges associated with serving major new loads in northern B.C.



Image used with permission from Apache.

NORTH COAST: LIQUEFIED NATURAL GAS AND MINING DEVELOPMENT

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 ➤ **RECOMMENDED ACTION #9: Continue to work with LNG developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically:**

- Undertake work to maintain the earliest in-service date for a new 500 kV transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.
 - Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019–2020 time frame, should it be needed.
-

In addition to the two Liquefied Natural Gas (LNG) facilities that are included within the IRP's base resource plan, BC Hydro is aware of a number of other LNG and new mine developments on the north coast. If a third LNG plant requests service or a number of new mines come online, BC Hydro would need to acquire significant additional annual energy and peak capacity. BC Hydro is studying a range of options to serve additional potential need on the north coast, involving both the energy supply and the associated transmission infrastructure.

LIQUEFIED NATURAL GAS DEVELOPMENT ON THE NORTH COAST

Several proponents are currently working to establish Liquefied Natural Gas (LNG) export facilities on the north coast — a potential investment of approximately \$20 billion that could also create many new jobs. The process of converting natural gas into a liquefied state consumes large amounts of energy. Usually, that energy is provided on-site by burning natural gas. BC Hydro is working with industry and the provincial government to determine how BC Hydro could meet the LNG industry's energy needs via clean electricity backed up by natural gas-fired generation, thereby reducing related greenhouse gas emissions.



The provincial government has committed to having three LNG plants in operation by 2020 being serviced by clean electricity and backed up by gas. Related provincial goals include:

- Ensuring that B.C. is competitive in the global Liquefied Natural Gas (LNG) market.
- Maintaining leadership on climate change and clean energy.
- Keeping energy rates affordable for families, communities and industry.

BC Hydro has sufficient current and planned energy supply to meet the energy needs of the first two of three potential Liquefied Natural Gas facilities. BC Hydro is studying supply options to meet possible additional electricity demand that could emerge if a third LNG plant is established in the longer term or if other additional electricity demand emerges.

NORTHEAST: NATURAL GAS EXTRACTION

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➤ **RECOMMENDED ACTION #10:** Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

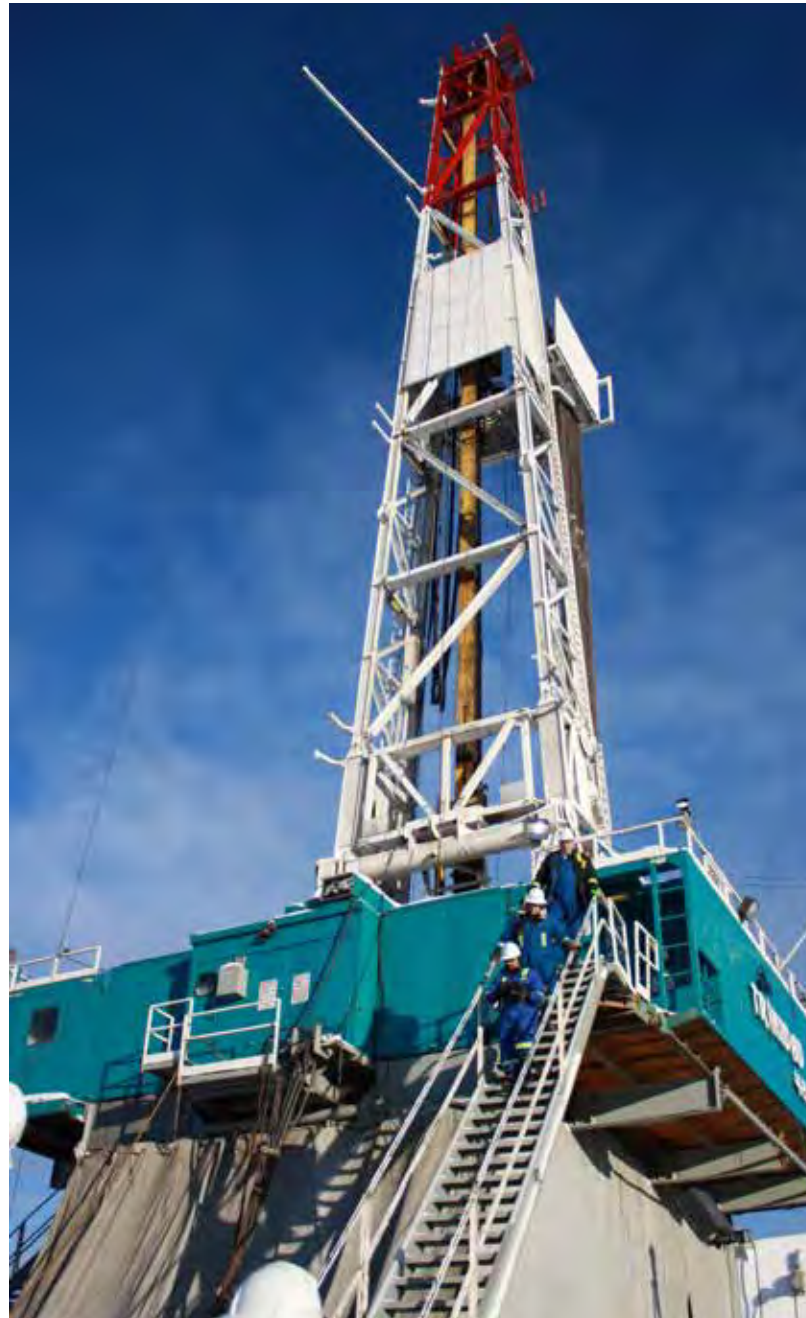
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BC Hydro is looking at the potential that large new natural gas extraction will emerge in the Horn River Basin in northeast B.C. and that the gas industry will seek electrical power from BC Hydro. The Horn River Basin encompasses a large area northeast of Fort Nelson that is not currently connected to BC Hydro’s integrated transmission system. Gas production in the Horn River Basin requires energy for two purposes: moving gas through pipelines, and processing the gas to remove impurities such as carbon dioxide (formation CO₂) and hydrogen sulphide (H₂S). Traditionally, the natural gas industry has met its own energy requirements by burning natural gas or diesel. However, the industry could be electrified — thereby reducing related greenhouse gas emissions and helping to achieve provincial climate change goals.

Two broad alternatives to serve this potential demand are:

- Building a new northeast transmission line to bring new clean energy to the region via the integrated system.
- Acquiring gas-fired electricity generated locally. Additional clean generation resources may also be added; however, these will not displace the need for gas as a backup.

BC Hydro is working with the provincial government, industry and potential independent power producers in assessing the options for serving the Horn River Basin.



430 of 759

PEAK CAPACITY RESOURCES

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➤ **RECOMMENDED ACTION #11a:** Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

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➤ **RECOMMENDED ACTION #11b:** Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

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In its base resource plan, BC Hydro recommends a combination of additional resources to address the forecast growth in peak capacity requirements. As discussed, BC Hydro has been able to rely on additional capacity within its large hydroelectric system to address growing capacity demands over the past two decades and, as part of this plan, will study how it can tap into the remaining Resource Smart opportunities on its existing facilities. Going forward, finding additional capacity resources will be more challenging. Renewable resources such as wind and run-of-river supply options cannot store energy. This means that when the wind doesn’t blow or rivers do not have adequate flows, BC Hydro needs to rely on other resources to meet demand. Now, for contingency planning purposes, BC Hydro must look beyond the base plan recommended actions and address what if growth is even greater than expected or other resources don’t come online when expected.

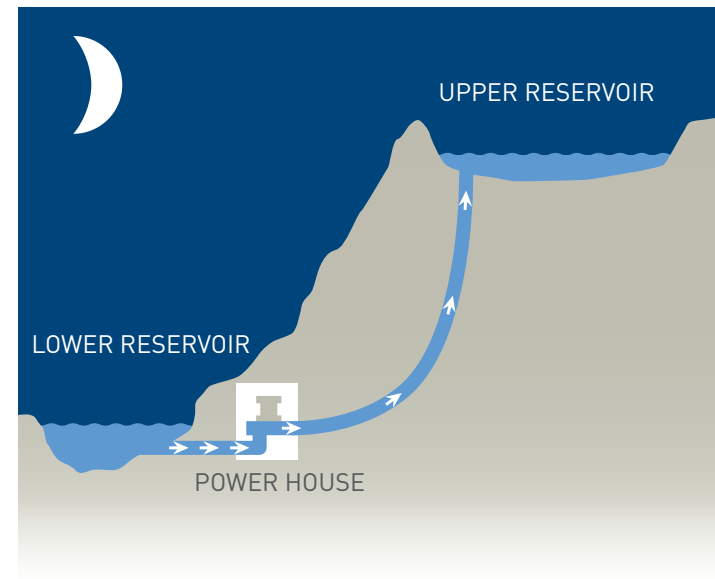
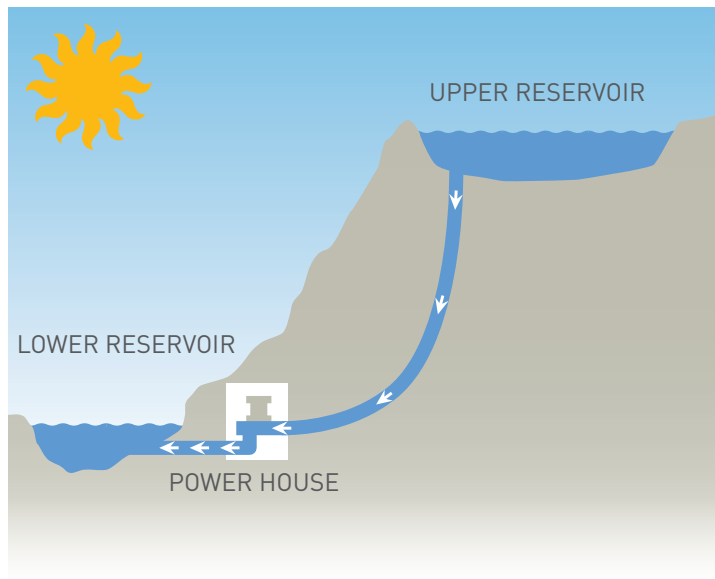
August 2013

Pumped storage involves taking advantage of the fact that reservoirs make excellent batteries: the water can be held for long periods and released through generating turbines only when necessary to meet electricity demand.

Utilities have the ability to recharge these batteries by using electricity to pump water from a lower reservoir to a higher reservoir when electricity is plentiful and cheap (in the middle of the night, or at times of the year when demand is low). Then, during periods of high electrical demand (i.e., at dinnertime on a cold, dark day), the stored water is re-released through the turbines to produce electricity when it is needed most. The pumping process makes the plant a net consumer of energy, but this storage of water for peak capacity gives significant additional flexibility to meet customers' electricity requirements.

Pumped storage projects are generally sited close to high-demand centres (to minimize electricity losses and the need for transmission lines) and in locations with a significant elevation difference. With high mountains near the major load centre in the Lower Mainland and on Vancouver Island, B.C. is well suited to pumped storage. However, such projects have not been built in B.C. before and the construction time for such a large project would be significant.

After BC Hydro exhausts Resource Smart projects, **natural gas** is the next-lowest-cost alternative for adding additional capacity to the system and therefore best addresses keeping electricity rates affordable. Natural gas-fired plants can be located close to where the electricity is needed, reducing the need to build new transmission lines.



EXPORT MARKET CONCLUSIONS

As part of the *Clean Energy Act*, government directed BC Hydro to study the potential to acquire electricity for the purpose of export. Through its wholly owned subsidiary Powerex, BC Hydro has a long and successful track record of trading electricity for the benefit of BC Hydro ratepayers. BC Hydro's reservoirs and its transmission connections to Alberta and the western United States have made it possible to trade electricity in a way that optimizes system efficiency and finds a market for electricity that is surplus to domestic needs.

Beyond this regular electricity trading, the government asked BC Hydro to examine whether there was a business case for acquiring renewable energy solely for purposes of export. In response, BC Hydro examined market drivers such as:

- U.S. government energy and environmental policies.
- The potential size of the renewable electricity market.
- The market share that B.C. could expect to capture.
- The transmission infrastructure that would be needed.

BC Hydro's analysis shows that current market conditions are not conducive to building clean electricity resources for export. B.C. electricity exports face relative disadvantages, including longer distances to potential markets (primarily California) and constrained transmission pathways. Also, U.S. tax credits for renewable energy, decreased interest in advancing greenhouse gas emissions regulation, and low natural gas prices all currently create an unfavourable environment for B.C. electricity exports. However, market conditions could change; therefore, BC Hydro will continue to monitor the export market potential.

► CONSERVE MORE

REDUCE ENERGY CONSUMPTION

1. Conserve More:
 - a) Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.
 - b) Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours.

ENCOURAGE LESS CONSUMPTION DURING PEAK DEMAND PERIODS

2. Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

BC Hydro's Integrated Resource Plan does not, by itself, commit BC Hydro to any specific capital projects. Recommended action items will be subject to subsequent approval and consultation requirements.

► BUILD AND REINVEST MORE

BUILD THE SITE C CLEAN ENERGY PROJECT

3. Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown's duty to consult and, where appropriate, accommodate Aboriginal groups.

TAKE ADVANTAGE OF RESOURCE SMART OPPORTUNITIES

4. Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.
5. Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.

COMBINE READILY AVAILABLE RESOURCES TO MEET THE SHORT-TERM CAPACITY GAP

6. Fill the short-term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and authorized by regulation.

REINFORCE TRANSMISSION

7. Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.

► BUY MORE

ENERGY FROM B.C.-BASED CLEAN ENERGY PRODUCERS

8. Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2016 – 2018 time period.

► PREPARE FOR POTENTIALLY GREATER DEMAND

POTENTIAL ADDITIONAL LARGE INDUSTRIAL DEMAND

9. Continue to work with LNG developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically:
 - Undertake work to maintain the earliest in-service date for a new 500-kV transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.
 - Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019 – 2020 time frame, should it be needed.
10. Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

PEAK CAPACITY RESOURCES

11. a) Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.
- b) Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

RESULT OF ACTIONS TO CONSERVE, BUILD, REINVEST AND BUY MORE

Recommended actions #1 through #8 address the forecast annual energy and peak capacity gaps. This portfolio of resources is recommended based on BC Hydro’s consideration of technical requirements, cost, provincial energy objectives, environmental and economic development attributes, and input gathered through consultation in 2011.

From a cost perspective, the recommended actions (or portfolio of resources) are the most cost-effective ones available that can reliably close the gap and meet provincial energy objectives, thereby helping keep rates affordable over the long term.

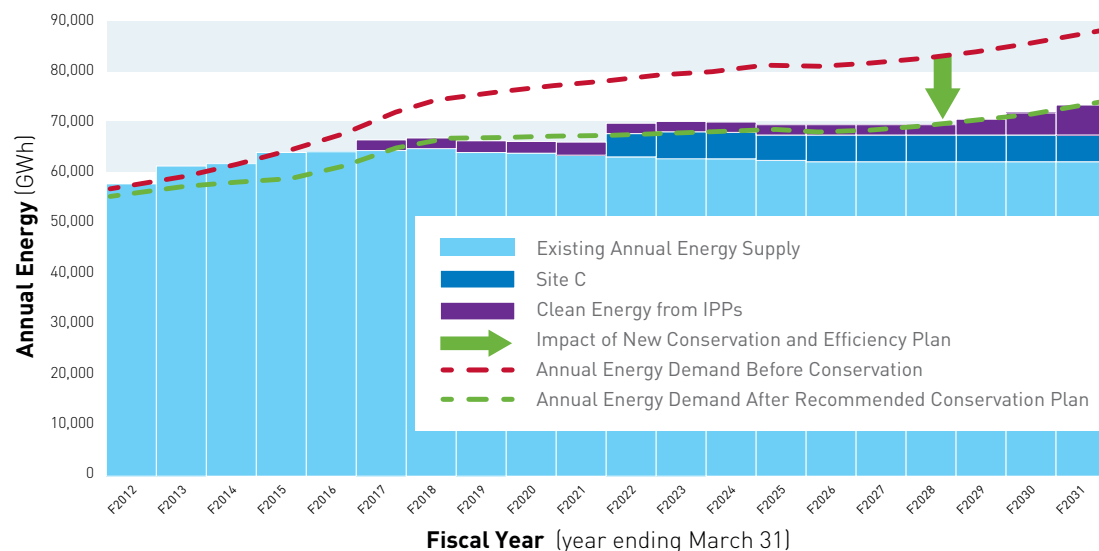
From an environmental and economic development perspective, the province’s clean energy, conservation, self-sufficiency and greenhouse gas reduction policies have guided BC Hydro in this plan, minimizing environmental impacts and supporting economic development. Beyond that, BC Hydro also compared the environmental footprints and economic development attributes of different portfolios. More information on the outcomes of BC Hydro’s portfolio analysis is available in Chapter 6 of the draft IRP available online at bchydro.com/irp.

The diagram below left summarizes how BC Hydro proposes to close the energy gap — first through cutting energy demand through conservation, then filling the remaining gap through a combination of energy from B.C.-based clean energy producers and Site C.

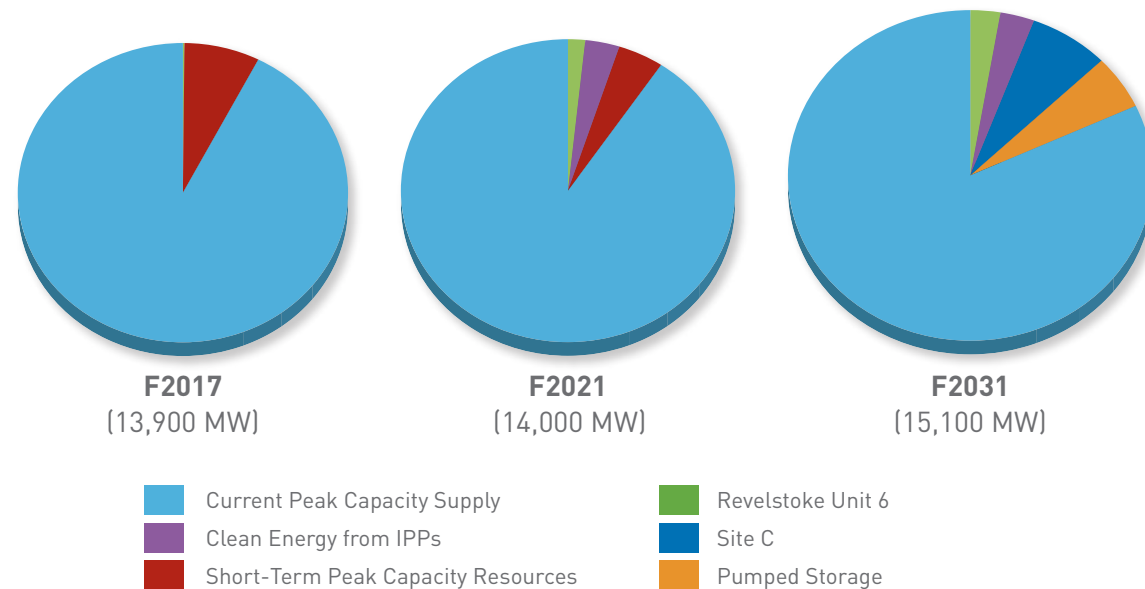
The diagram below right summarizes how BC Hydro proposes to close the gap between peak capacity requirements and existing resources, both in the short-term (the 2017 time frame) and the longer term (2021 and 2031).

As BC Hydro works toward fulfilling future electricity requirements, it will continue to monitor emerging new demand closely and be ready to adjust course as needed. In particular, forecast new demand from the liquefied natural gas industry requires close attention, as new LNG demand will arrive in substantial segments, versus growing slowly and incrementally over time.

THE RECOMMENDED ACTIONS WILL FILL THE PROJECTED ANNUAL ENERGY GAP.



THE RECOMMENDED ACTIONS WILL FILL THE PROJECTED PEAK CAPACITY GAP.

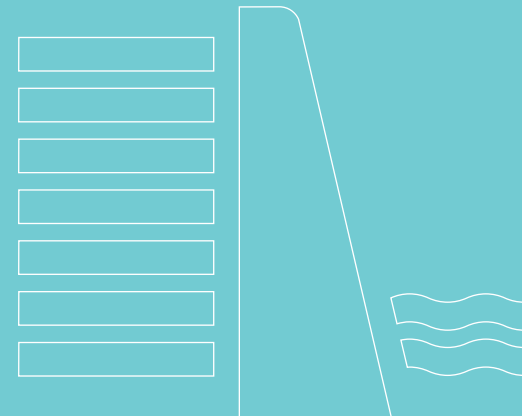
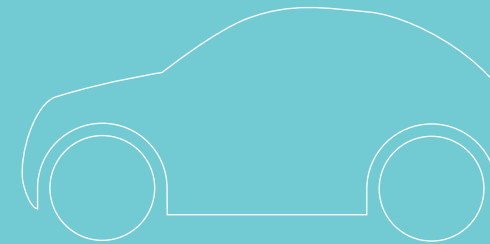
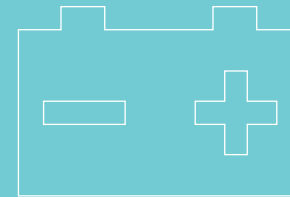




DRAFT INTEGRATED RESOURCE PLAN — 2012

**A PLAN TO MEET B.C.'S FUTURE
ELECTRICITY NEEDS**
CONSULTATION FEEDBACK FORM
MAY 28 TO JULY 6, 2012

**WE WANT
TO HEAR
FROM YOU!**



Turn to pages 10-11 for more information on this topic

BC Hydro is forecasting that demand for power will increase by about 50 per cent over the next 20 years. In order to meet that demand reliably, affordably and within guidelines set by the B.C. *Clean Energy Act*, BC Hydro has created a plan to: conserve more, build and reinvest more in existing facilities, buy more made-in-B.C. energy; and prepare to meet potentially greater demand if required. Please provide your feedback about the following set of recommended actions for meeting B.C.'s future electricity needs.

➤ CONSERVE MORE

REDUCE ENERGY CONSUMPTION

1. a) BC HYDRO RECOMMENDS CONSERVING MORE BY:

- **Increasing our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.**

a) Please indicate your level of agreement with this recommendation.

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Please indicate the reasons for your level of agreement:

1. b) BC HYDRO RECOMMENDS CONSERVING MORE BY:

- **Exploring more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours.**

a) Please indicate your level of agreement with this recommendation.

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Please indicate the reasons for your level of agreement:

ENCOURAGE LESS CONSUMPTION DURING PEAK DEMAND PERIODS

2. BC Hydro recommends pursuing voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

a) Please indicate your level of agreement with this recommendation.

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Please indicate the reasons for your level of agreement:

HOW INPUT WILL BE USED

Feedback received through consultation on the draft Integrated Resource Plan will be considered, along with any other final inputs, as BC Hydro prepares a final Integrated Resource Plan for submission to government for review and approval. A Consultation Summary Report summarizing feedback received through consultation will be posted on BC Hydro’s website at bchydro.com/irp and will be included in the plan submitted to government.

FEEDBACK DEADLINE:

Please submit your feedback by **JULY 6, 2012**.

Are you a: BC Hydro customer BC Hydro employee Other

Please provide your contact information *(optional)*:

Name: _____

Address: _____ Postal Code: _____

Phone: _____ Email: _____

Consent to Use Personal Information

I consent to the use of my personal information by BC Hydro for the purpose of contacting me and keeping me updated about future consultations on integrated resource planning. For the purposes of the above, “my personal information” includes name, mailing address, telephone number and email address, as provided above.

Signature: _____ Date: _____

BC Hydro is collecting information for its Integrated Resource Plan in accordance with BC Hydro’s mandate under the *Hydro and Power Authority Act*, the BC Hydro Tariff, the *Clean Energy Act* and related Regulations and Directions. If you have any questions regarding the information collection undertaken on this form, please contact the IRP Project Team Administrator at 1 888 747-4832.

For further information or to submit your feedback form:

BC Hydro Integrated Resource Plan
 Email: integrated.resource.planning@bchydro.com
 Web: bchydro.com/irp
 Mailing Address: P.O. Box 2850, Vancouver, B.C. V6B 3X2

- **ATTRIBUTE** A characteristic that describes a resource option or portfolio, used to assess its performance in meeting the planning objectives.
- **BASE LOAD** An amount of electricity committed or available over a period of time at a steady rate.
- **BRITISH COLUMBIA UTILITIES COMMISSION (BCUC)** An independent regulatory agency of the provincial government operating under and administering the *Utilities Commission Act*. The BCUC regulates BC Hydro's domestic supply and rates, and the safety and reliability of the BC Hydro system, as well as operating, management and administrative costs, and also assesses concerns from ratepayers regarding BC Hydro's service.
- **BULK TRANSMISSION** The transfer of electricity on the major high-voltage transmission system that carries the majority of power from the generators to the lower-voltage distribution systems.
- **CANADIAN ENTITLEMENT** is a result of the Columbia River Treaty between Canada and the United States in which Canada agrees to operate its dam on the Columbia River in a way that optimizes hydroelectric power-generating potential in both countries. In return, Canada receives one-half of the extra power potential in the U.S.
- **CAPACITY** The instantaneous power output or electricity demand at any given time, normally measured in kilowatts (kW) or megawatts (MW). A transmission facility's ability to transmit electricity at any instant.
- **CLEAN OR RENEWABLE ENERGY** is defined by the *Clean Energy Act* as including biomass, biogas, geothermal heat, hydro, solar, ocean, wind or other prescribed resources.
- **COGENERATION** The simultaneous production of electrical or mechanical energy and useful heat energy from a single fuel source.
- **COLUMBIA RIVER TREATY** A treaty signed in 1961 between Canada and the U.S. that enabled storage reservoirs to be built and operated in British Columbia to regulate Columbia River flows to the U.S. for power production and flood control.
- **CONSERVATION** Reducing energy consumption. For example, turning off unused lights to conserve resources.
- **CURTAILMENT** A reduction in demand as a result of demand-side management.
- **DEMAND** Customers' requirement for electric power.
- **DEMAND-SIDE MANAGEMENT** Actions, programs and initiatives aimed at modifying or reducing energy consumption through conservation and energy efficiency.
- **DEPENDABLE CAPACITY** The amount a plant can reliably produce when required, assuming all units are in service, measured in megawatts (MW). Factors external to the plant affect its dependable capacity. For example, streamflow conditions can restrict the dependable capacity of hydro plants and fuel supply constraints can impact thermal plant dependable capacity. Planned and forced outage rates are not included. The dependable capacity used for long-term planning is the maximum capacity that a plant/unit can reliably provide for three hours in the peak load period of weekdays during two continuous weeks of cold weather.
- **DISPATCHABLE** A resource whose output can be adjusted to meet various conditions including fluctuating customer demand, weather changes, outages, market price changes and non-power considerations.
- **DISTRIBUTION SYSTEM** Electrical lines, cables, transformers and switches used to distribute electricity over short distances from substations to the customer, generally at voltages lower than 69 kV.
- **EFFICIENCY** The effective rate of conversion of a natural resource (e.g., electricity) to usable energy; the effective rate of conversion of electricity to an end use (e.g., heating).
- **ELECTRICITY** is a type of energy fuelled by the transfer of electrons from positive and negative points within a conductor.
- **ELECTRICITY PURCHASE AGREEMENT (EPA)** The contract that defines the terms and conditions by which BC Hydro purchases electric energy from Independent Power Producers.
- **ELECTRIFICATION** is the process of switching from an alternative power source to electricity. Some examples include switching from gasoline-powered cars to electric cars, replacing diesel generators, or using electrical conveyor systems instead of diesel trucks in mining operations.
- **EMERGING TECHNOLOGIES** Technology at the first stages of development or demonstration. Not readily available in commercial markets and not in commercial use, as evidenced by at least three generation plants generating energy for a period of not less than three years, to a standard of reliability generally required by good utility practice.
- **ENERGY** The amount of electricity produced or used over a period of time, usually measured in kilowatt hours, megawatt hours and gigawatt hours.
- **ENERGY CAPABILITY** is the amount of energy that can be generated under specified conditions by a generating unit or by the electric system over a period of time, typically expressed in GWh/year.
- **FIRM ENERGY** refers to electricity that is available at all times. Resources typically providing firm energy include large hydroelectric dams, bioenergy, geothermal and natural gas.
- **GREENHOUSE GASES (GHG)** Gases that contribute to global climate change, or the "greenhouse effect," including carbon dioxide, nitrous oxide and methane.
- **GRID** A network of distribution or transmission lines.
- **GWh** stands for gigawatt hour, a unit of electrical energy equal to one billion watt hours.
- **INDEPENDENT POWER PRODUCER (IPP)** A non-utility-owned electricity-generating facility that produces electricity for sale to utilities or other customers.
- **INTEGRATED SYSTEM** An interconnected network of transmission lines, distribution lines and substations linking generating stations to one another and to customers throughout a utility's service area. Excludes customers located in remote locations who are connected via non-integrated generating plants.
- **INTERMITTENT** Electricity supply that fluctuates or is not available at all times. For example, wind energy only produces power when the wind is blowing.
- **LIQUEFIED NATURAL GAS** is natural gas that has been cooled sufficiently that it will liquefy under normal pressure.
- **LOAD** The amount of electricity required by a customer or group of customers.
- **LOAD FORECAST** The expected amount of electricity required to meet customer needs in future years.
- **MW** stands for megawatt, a unit of electrical power equal to one million watts.
- **OUTAGE** A planned or unplanned interruption of one or more elements of an integrated power system.
- **PEAK CAPACITY** The maximum amount of electrical power that generating stations can produce in any instant.
- **PEAK DEMAND** The maximum instantaneous demand on a power system. Normally, the maximum hourly demand.
- **PORTFOLIO** A group of individual resource options to be acquired in a sequence over time to fill customers' future electricity needs.
- **POWER** The instantaneous rate at which electrical energy is produced, transmitted or consumed, typically measured in watts, kilowatts (kW), or megawatts (MW).
- **POWER SMART** BC Hydro's demand-side management initiative to encourage energy efficiency by its customers. Originally launched in 1989, Power Smart includes a full range of DSM programs aimed at BC Hydro's residential, commercial and industrial customers.
- **RATE** Term used for a utility's unit price of service.
- **RATE STRUCTURE** Represents the set of rates paid by a class of customers (e.g., residential) for use of electricity.
- **REINFORCEMENT** Improvements in the transmission system to maintain or increase reliability and security of supply.
- **RELIABILITY** A measure of the adequacy and security of electric service. Adequacy refers to the existence of sufficient facilities in the system to satisfy the load demand and system operational constraints. Security refers to the system's ability to respond to transient disturbances in the system.
- **RESERVE** System generating capacity beyond that required to meet peak demand, ensuring sufficient generation is available if some generating units are not available; necessary to meet reliability criteria for planning and operation.
- **RESERVOIR STORAGE** The volume available in a reservoir to hold water for power generation or flood control.
- **RESOURCE OPTION** A source of electricity that is available to help meet or reduce electricity demand, including generation, purchases, demand-side management and transmission facilities.
- **RUN-OF-RIVER** A hydroelectric facility that operates with no significant storage facilities.
- **SCENARIO ANALYSIS** A set of planning assumptions to test the long-term performance of a portfolio.
- **TAC** A Technical Advisory Committee (TAC) was established to provide detailed technical input and feedback to assist BC Hydro in creating a well-considered Integrated Resource Plan (IRP). Members of the Committee include representatives from the public, First Nations and stakeholders. Materials can be found on bchydro.com/irp.
- **TRANSMISSION SYSTEM** Electrical facilities used to transmit electricity over long distances, usually at voltages greater than 69 kV.
- **VOLTAGE** The strength of electromotive force (EMF).

bchydro.com/irp



For more information, please visit: bchydro.com/irp.

You can also provide feedback and learn more about the Integrated Resource Plan by:

- Attending a public open house: bchydro.com/irp
- Online feedback form: bchydro.com/irp
- Written submissions: integrated.resource.planning@bchydro.com or P.O. Box 2850, Vancouver, B.C. V6B 3X2
- Toll-free phone: 1 888 747-4832

[Integrated Resource Plan](#)

BChydro 
FOR GENERATIONS



Appendix 11 — 2011 Workshop Summaries of Input

BC Hydro Integrated Resource Plan: First Nations Consultation

Nanaimo – March 2, 2011

Vancouver Island Convention Centre

First Nation Attendees

K'omoks First Nation	Tsawout First Nation
Lyackson First Nation	Tseshaht First Nation
Pauquachin First Nation	Ucluelet First Nation
Penelakut Tribe	BC First Nations Energy and Mining Council
Toquaht Nation	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Nadja Holowaty	Energy Planning
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan & How is it Developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro's plan to meet the province's future electricity needs. Nadja Holowaty then provided an explanation of how BC Hydro's Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro's presentation for their reference.

Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?
- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations' interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

One participant indicated they would like to see BC Hydro more engaged with their community by helping them install solar panels and developing solar power capabilities so that they are able to improve their community's efficiency. Rather than hearing about the BC Hydro's conservation and efficiency advertisements and marketing in the media, they would like to see it implemented in their community.

Participants expressed interest in having conservation and efficiency achieved through low impact environment solutions. One participant indicated they have studied the effects of gas pipelines and the building of dams and believe that projects such as solar energy will have a lower impact on the environment. It was also stated that with greater conservation and efficiency, generally there will less impact on their territory and resources.

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Participants noted that BC Hydro should work harder with industry to support greater efficiency and conservation. Participants noted that they would also like to see more engagement with local governments to help First Nations with electricity and land use planning such as incorporating solar energy on buildings that are south facing in order to offset costs and increase supply.

A participant indicated that unless landlords or home owners improve the energy efficiency of the homes, renters will be stuck with high electricity and hydro bills which will impact low-income families.

A participant stated that BC Hydro should consider working with LED manufacturers to improve the quality of the light bulbs. This participant noted that if the lighting is not improved it will be difficult to convince consumers to use this type of lighting.

A participant expressed concern that their community may not understand the implications of BC Hydro's climate change initiatives. If the province is encouraging a type of energy resource they would like to see BC Hydro educate their community on the possible implications of these initiatives.

It was noted that alternative fuel sources, such as wood stoves, are not being championed. An example was provided that would see BC Hydro identifying for consumers what it believes are the top five wood stoves to use.

For communities that are off the grid, participants indicated that they would like BC Hydro and the province to help communities get on the grid or to become self-sufficient through available resources such as streams, solar or wind.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

Participants expressed concern regarding the cost of electrification. A participant indicated that there are ways to meet electrification without increasing costs, and an example given was to partner with the provincial government to share revenues. Another participant added that to promote electrification there needs to be low cost energy and clean energy to accompany it; an example provided was solar panels at electric car plug-in stations. A concern was raised that First Nations cannot afford increasing costs for energy. One participant stated they could not afford a regular car, let alone an electric car. Concern was also raised that if their community switches to electrification what are the chances the rates for electricity will increase as was experienced with the soaring gas prices when consumers switched to gas fireplaces. To avoid this, a participant asked to consider incentives for customers to lock into rates so that people will know what they can expect on their electricity bills.

One participant indicated that the growing population in their community creates a problem of how to meet the increasing demand for electricity. One participant raised a concern about electrification because there was already too much demand for electricity in their community.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Concern about the reliability of the transmission and distribution system was raised by a participant. The participant noted that if you have higher demands for electricity due to electrification, the reliability for power, particularly in poor weather conditions, may be compromised. It was suggested that BC Hydro consider undergrounding the distribution. It was also suggested that BC Hydro consider other forms of electricity generation (aside from dams) that work with future weather scenarios.

It was noted that adding the Horn River industrial development to the grid will make conservation objectives more difficult to achieve.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation.

A couple of participants asked how the make up of the portfolios is determined and expressed concern that some resources were not considered, such as geothermal or solar. One participant indicated that because some resources were not included in the portfolios, they could not comment on the renewable mix.

A participant indicated that they do not want energy that may negatively impact another First Nation community in the Province. It was expressed Site C will create permanent damage whereas other options, such as geothermal and solar, have long term, lower cost benefits.

Another participant indicated that they have no interest in importing energy into their communities which causes problems for other communities such as where they are proposing to build the Site C dam. Instead the participant preferred developing the energy within their community noting that they do not want to be reliant on energy from somewhere else in the province.

A participant expressed concern that BC Hydro may be resourcing energy options on their traditional territory. The participant indicated that they would like a map with the grids, windmills, and other energy sources that BC Hydro may be resourcing and use this in the context of traditional territory maps.

It was also indicated that the most environmentally friendly option may be the most costly but the best investment for the future as well as an option that will decrease the amount of backup required.

A participant stated that in order for people to provide an assessment on the portfolio options they need to understand the associated costs.

Another issue that was raised is that First Nations and BC Hydro do not share the same view on the costs of energy development. It was indicated that Site C is too expensive even in comparison to the higher cost of solar.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Regarding example Portfolio three: Renewable Mix with Site C and Gas Fired Generation (within 93 per cent *Clean Energy Act Target*), a participant noted that this option will have the largest environmental footprint for the territory due to the power plant and gas pipelines needed to generate the plant.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

A participant indicated that they prefer the proactive approach as they believe it would have less impact on the environment due to fewer lines that will be created. The participant is concerned that more lines will impact First Nations resources, such as animal paths. However the participant expressed that in order to identify the best routes for transmission in pursuing the proactive approach, BC Hydro must speak with First Nations to understand their preferences.

Another participant indicated they would always prefer that existing transmission routes are used as opposed to creating new ones as this would have lower impact on land and wildlife.

One participant was concerned about the economic benefits First Nations receive if BC Hydro implements transmission lines in their territory. The participant noted that BC Hydro should work with the communities and communicate with them about their territory.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

A few participants stated that if First Nations received revenue-sharing on the exported electricity, this would be positive especially if the energy is generated within their territory. One participant was concerned with the export market potential without understanding the portfolio option that would be considered.

It was noted that exporting would be viable if First Nations are full partners in the export program, benefitting from it and leading where projects are built. One participant indicated that they are opposed to the Site C dam if it will be used to export energy.

The concern raised was that if BC Hydro has clean energy objectives, First Nations need to know whether BC Hydro is importing clean energy or not. The example provided was that California legislates that only clean energy be imported and if California can enforce that then B.C. should be able to as well.

Clean or Renewable Energy Development in First Nations Communities

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Remote Communities and Electricity Supply

Some participants noted that they would like BC Hydro to identify other energy options for those communities that are off the grid. They would like to understand the available energy opportunities in their communities and to work with BC Hydro on developing these opportunities.

Disposal of LED Lights in First Nation Communities

A participant noted that they would like to see education in the schools related to waste; the participant expressed concern about the mercury in the LED light bulbs and the potential for poison to impact their local environment. The participant would like to see a deposit considered for the proper disposal of the LED light bulbs.

Solar Energy Projects in First Nation Communities

A participant noted that they would like BC Hydro to conduct a study on a community based solar project and determine the cost effectiveness of such a project. This participant noted that if BC Hydro was able to show what the returns to First Nations would be on such a project, this approach could be streamlined and used to implement solar energy projects in other First Nation communities.

Additional Comments

Power Outages in First Nation Communities

One participant noted that power outages in First Nation communities are a concern. The participant said that power outages are experienced on numerous occasions and it results in food loss and health risks. The participant stated that BC Hydro should make addressing this problem a priority.

Employment Opportunities

With low income families and high unemployment rates in their communities, a participant noted that they would like to see employment opportunities for First Nations in their communities. For example, First Nations could read hydro meters. If there is a BC Hydro office in a First Nation community then the First Nation should be employed in those offices.

Education Programs

A participant would like to see BC Hydro come into their communities and talk about the programs they offer. BC Hydro should consider running workshops in their communities and educate their people on conservation and efficiency. BC Hydro should take a leadership role in educating and engaging youth in First Nation communities as they are critical to the vision for a clean energy future. It was recommended that BC Hydro create an award or sponsor a competition for developing clean energy ideas or opportunities in their community. This could help to motivate and educate First Nation youth who are the future of their communities.

Consultation Process

Long-Term Electricity Transmission Inquiry: One participant who had participated in the Long-Term Electricity Transmission Inquiry wondered whether the feedback from that session was incorporated in this workshop. There was frustration that there was no information that was

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

shared with the participants after that session. The point was also made that First Nations felt the Long-Term Electricity Transmission Inquiry was not consultation but rather information sharing.

Integrated Resource Plan: It was stated that there should be adequate time for people to give their input on the portfolio scenarios before the plan is put in place. There was also concern that the timeframe between meetings is too long and that there should be commitment to meet every month.

Vegetation Management

A participant would like the management of invasive plant species along transmissions lines right-of-ways if BC Hydro decides to export.

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for following up purposes.

1. Information on the Long-Term Electricity Transmission Inquiry
2. Send an electronic copy of the First Nation Input Form

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

BC Hydro Integrated Resource Plan: First Nations Consultation

Campbell River – March 3, 2010
Coast Discovery Inn & Marina

First Nation / Organization Attendees

Campbell River Indian Band
Cowichan Tribes
KWAKIUTL DISTRICT COUNCIL
BC First Nations Energy and Mining Council
Quatsino First Nation

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
John Rich	Energy Planning
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan and how is it developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro's plan to meet the province's future electricity needs. John Rich then provided an explanation of how BC Hydro's Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro's presentation for their reference.

Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?

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- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations' interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

A participant questioned how BC Hydro could reconcile selling electricity to make more money, but also promote demand side management. The participant believed BC Hydro is in the business to sell electricity.

A participant noted that they would like to see a commitment from BC Hydro to work with communities to reduce energy consumption. Currently their community is off the grid and they would like to find renewable energy solutions for their homes and commercial buildings as well as find ways to reduce consumption. Since there is no law that requires communities to achieve carbon neutrality, changes need to be community-driven. First Nations require capacity and training to implement a conservation programs and to get people involved. The programs need to be fun for youth to be involved.

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A participant shared the reality of their members' living conditions, with many homes inhabited by more than 15 people, high electricity bills, and 80% of people living below the poverty line. BC Hydro needs to help their community achieve net zero homes and implement other demand side management programs. They need a long-term commitment.

A participant proposed a feed-in tariff whereby homes that are conserving their use should have the option to make money. This option will be important for those bands that are responsible for paying their members hydro bills. There was a request to have this idea considered if it has not been already.

In order to help those communities off the grid that are relying on diesel generation, BC Hydro could provide their professional help to implement new energy projects such as wind energy to achieve lower greenhouse gas emissions.

Several participants noted that reducing costs was an important consideration. Community members are complaining of high hydro and gas bills. They are also interested in learning from other First Nations who have successfully developed renewable energy projects. Education is very important as it engages the community. Ideas included:

- Partnering with BC Hydro and Terasen on addressing green house gas.
- Educating members so that First Nations will be interested and participate. A solar mentorship program was suggested.
- There was an interest in rebate cheques for renewable energy projects that could be applied against the costs of the project. This was viewed as an incentive to members who can then see an opportunity to make money back

It was pointed out that BC Hydro should combine small scale generation with conservation. If households are able to conserve energy, that will give them energy that they could potentially sell and make money on, so there is an incentive there for them to conserve. The participant would like to see the new smart meters be used for selling power back into the grid. This would provide an incentive for renters to conserve because they could make money.

The opportunity for BC Hydro lies within the communities and their approach to conservation. Education on conservation and efficiency is important and participant input was as follows:

- One participant noted that before implementing smart meters more education resources and capacity. Partnership is important. Homes are inhabited by large families with many generations. Electricity is used when it is needed (i.e. the laundry machine). Right now people will not look at their smart meters. Later down the road smart meters may help.
- Another participant indicated that 80 % of their members are on social assistance and are not responsible for paying for their energy bills and their energy consumption. The band office pays the energy bills. People need to understand conservation and therefore it is important to have education programs.

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A participant stated that the more we bring down the bills, the more we are able to build new homes. We need members to move back home. The more we can reduce costs, the more benefit to us so that we can offer more services and benefits to our members.

A concern was expressed with the push for conservation when there are consistently new homes being put up that require electricity. There is contradiction between the pursuit of a growth agenda (and a corresponding growth in energy consumption) when we are trying to conserve energy.

A concern was raised that communities will put in a real effort to conservation but the effort may get offset by greater economic development somewhere else in the province. If the objective is conservation then people will participate but if their efforts are being offset by export or other activities they will question it.

There were a number of concerns with the effort that people make in conserving energy but a perceived lack of effort from industry, businesses or the wealthy as follows:

- Do not understand pursuing conservation objectives when there are electric billboards on the highway.
- When wealthy neighbors do not take conservation measures seriously because they can afford electricity it makes the effort of those that do conserve useless. A participant questioned whether cruise ships will have smart meters. If everyone is conserving, except the people with the money who are not conserving electricity on the ship, it just defeats it all. It makes a farce of the attempt. The participant noted that people are working hard to conserve energy but the rich guys or the cruise ships do not care.

A participant pointed out that we, as humans, feel a responsibility to address carbon emissions which is why First Nations are looking at energy plans. First Nations can lead energy planning. The participant has an oil furnace that emits greenhouse gases and wants to convert it to a heat pump but that is too expensive. BC Hydro needs to have programs to assist First Nations to become more energy efficient.

A participant suggested community light posts use LED lights as a way for communities to save money.

There was an interest in funding to upgrade infrastructure which will keep energy costs down and improve conservation.

It was noted that First Nations have a lot of underemployed people living in their homes, and a lot are on social assistance and many of their homes are seriously overcrowded with double the occupancy in some homes. A participant raised a concern that First Nations would experience the burden of extra costs when they are only trying to meet the needs of their family. Behavior modification could unduly penalize First Nations people who are unemployed.

A participant indicated that their homes are on the flood plain, so their septic tanks are failing and the grinder pumps are operated almost non stop. It is a concern for this participant that

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First Nations members may be penalized with growing rates. Another participant added that the band will have to bear those increased costs and they need money for this.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

It was pointed out that BC Hydro should combine small scale electrification with small scale generation.

A participant wondered how the greenhouse gas emission targets are going to be factored into the Integrated Resource Planning process. To achieve greenhouse gas reductions that will mean electrification, but that puts a load on the electrical system. The two need to be balanced by government. We need to weigh and integrate the two objectives. It was commented that this will apply to mining objectives too. An example was provided from the Yukon, where they build transmission for economic reasons because it may bring in mining. There was a concern that BC Hydro can only do so much and these issues need to be considered by government from a broader perspective.

It was indicated that First Nations communities do not have zoning or bylaws in place at the community level and that it is important to get a community plan and policy in place. Individual landowners own pieces of land but don't have zoning in place to say that BC Hydro or other proponents cannot do something on their land. The concern is that if there is a proposed project the communities do not have land zoning in place to deal with that.

There has to be a linkage between provincial and First Nations land use plans.

It was questioned who will be responsible for paying for the electrification that is tied to the oil and gas industry. The participant questioned pursuing green house gas reductions while subsidizing a fossil fuel industry. It was stated that the government objectives are at odds. Although it was acknowledged that it was not part of the Integrated Resource plan, it was noted that the carbon tax is relevant to communities.

Participants expressed concern about costs to ratepayers and wondered who pays for the transmission lines. The recently proposed rate increases are a concern because this will have a huge impact on their members. It is hard for their community to understand why their bill is going up. There is value in having a conversation about the bigger picture and to compare BC's energy costs to other areas of the world.

Concern was raised that the people that bear the implications and impacts of new generation on Vancouver Island are not necessarily the ones who use the electricity. A concern was raised that the demand for electricity is on the island, but those living elsewhere in the province will bear the impacts of that demand.

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It was indicated that First Nations need to be actively engaged so that they are not compromised in the end. If First Nations do not support a project in their territory then it should not be the subject of further conversation.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation

A question was raised about demand side management in an economy that sells technology, electric cars, etc. What would the implications be on the energy supply in BC if everyone switched from gas to electric cars?

With wind energy, the wind is not blowing all the time and with run-of-river the river is not flowing all the time. A participant acknowledged that Site C provides more firm energy, but said that we need to avoid flooding the Site C area.

There was a concern that climate change may impact the energy resources such as the amount of wind in the province. It was also asked whether BC Hydro considers the energy capacity to wind as you may expect revenues for 10 years, but there is the risk that in 15 years climate change could affect the wind energy.

Dan George asked what the First Nations' perspectives were directly related to Portfolio One:

A participant raised concern with the renewable mix and how this would relate to land use and economic benefits for First Nations. First Nations' communities may want to develop a resource such as wind, but are not yet ready to do so at this time. If wind energy is developed elsewhere in the province then the opportunity may be gone when First Nations are ready to develop the resource. The window of opportunity closes.

There was an interest in BC Hydro identifying for the participants areas of renewable energy potential.

A participant raised the importance of doing feasibility studies (i.e. whether there is enough wind potential) before undertaking several years of applications.

Dan George asked what the First Nations perspective was directly related to Portfolio Two: Renewable Mix with Site C

It was indicated that there was a need to look at the portfolio in more depth and that more information was needed.

One participant stated that the trade-offs in the portfolios required more scoping. The participant noted that people would choose a lesser environmental footprint or lesser costs but they need to understand the trade-offs.

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There were several comments raised regarding the timeline of the draft plan as follows:

- There should be some point between the first round of meetings and the development of the draft plan to provide input. The participant noted that it is too early to answer and after a draft plan is in place it is too late. Somewhere in between those timelines is better.
- Making the draft available online would be helpful so it can be shared with their communities. They will need to do their own due diligence as they do not know enough about Site C to give an intelligent response and would like to go back and understand it.
- Would like to receive a notice when the draft plan is available so they are able to comment and provide feedback.

A concern was raised that the technical attributes of the resources being considered may ignore some social or quantifiable attributes that other people would put on those.

A participant noted that the rationale behind the portfolios should be shared so they can understand the thinking that went into them. There was recognition of the intense research and analysis that must go into these portfolios.

There was an interest in decentralized options for generating electricity.

Dan George asked what the First Nation's perspective was directly related to Portfolio Three: Renewable Mix with Site C and Gas-fired Generation.

A participant noted that they would like homes that will be self-sufficient and that can sell and use energy.

A participant noted that there are other options out there that can be considered.

A participant noted that it just comes down to the particular First Nation and their territory and how they see it being used and allocated.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

A concern was raised with respect to future generations and where it takes place. A First Nation may not want their entire territory covered by wind farms. Some First Nations may not want wind farms. If there is more transmission to the northern part of Vancouver Island this means more applications and with each new application there is less aboriginal title in the territory.

A participant questioned if there is the potential for a proponent to propose a transmission line and not follow a consultation process and bypass those requirements. There is a concern about potential quasi private transmission companies operating under the radar. The participant would like to see revenue sharing and royalties where projects are in their territory.

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One person indicated that as long as in the future there is not a whole bunch of new rights-of-way then it would be okay.

Some participants noted that it was difficult to comment on the two different approaches to transmission planning as follows:

- A participant indicated that they have a large number of Certificates of Possession which means there are specific claims on those lands by members in the community. This means the band itself does not have a lot of say what is built on those lands. The participant stated that they understand that there needs to be access, but they do not have bylaws or land management codes which make it difficult to comment on these approaches.
- One participant noted that the two approaches were very technical and questioned why they were being shown the two approaches.

Other participants provided comments and perspectives directly related to the two transmission planning approaches.

Responsive Approach to Transmission Planning

- A comment was made that with the responsive approach is more linear feet of line which must mean more power losses. Another participant noted that it is not the amount of line; it is the distance from the source to the consumption.
- A participant indicated that the responsive approach is better for their community now because they would want to pay the least now.

Proactive Approach to Transmission Planning

- One participant preferred the proactive approach because less land would be taken up and fewer environmental risks.
- Another participant noted that the proactive approach is a lot cheaper than the responsive approach due to economies of scale.
- A participant indicated that there are factors beyond cost and that the proactive response is better from a land-use planning perspective for First Nations as it minimizes the environmental footprint. The participant stated that it is a question of which risks they would want to go with. The lower cost risk at this point is probably the responsive approach but there is a trade off with the infrastructure building that will occur later. The proactive approach will cost more now, but over the long term the cost will be less.

A participant expressed frustration with the amount of time First Nations have wasted on projects that never materialize. Some people have the assumption that they will all get built but there may not be enough wind, for example. BC Hydro needs to coordinate the planning of the transmission potential and work with First Nations on potential projects.

It was suggested that BC Hydro provide GIS shape layers for Vancouver Island indicating where the rights of ways are located. This data will be important to share so that First Nations can overlay it with their own data. Another participant agreed that the GIS mapping is of interest for First Nations.

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Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

A participant questioned how the benefits the Province gets from export can be justified when customers are not benefiting from reduced rates.

A participant was concerned that the same clean energy standards applied to the generation of electricity in BC does not apply to the energy the province imports. There was a concern that BC could be facilitating the move of dirty energy from Calgary to California, for example, which is not in line with BC Hydro's objective of reducing greenhouse gases and being more renewable.

A concern was raised about the transmission capacity being used for export. It is one thing to ask First Nations to make space available for domestic transmission and it is another to accommodate transmission for trade purposes.

If there is a generation line that goes through BC and impacts First Nations then that raises concern that the energy will be exported out of the province.

There were several comments about how export should be used to lower rates as follows:

- A participant stated that if export reduces their rates then go for it.
- A participant noted that if export brings down their rates then that is the biggest interest.
- A participant stated that their needs may be different than other communities but it is important to their community that rates are down.

A participant indicated that the benefits of export should be brought back to the First Nation. They would want a premium on their royalty in the form of an impact benefit agreement if BC is getting a premium by exporting to the US.

One participant noted that this is a specific geography question and it needs to fit in with the First Nations' visions for their territories.

It was indicated that if it locks First Nations into agreements that they cannot get out of or if it sets precedence then that is a concern. They would not want to see power leave and then suddenly be in a position where they need that power but cannot have it because of an existing contract or agreement. An example was given that if they give oil to the U.S. and they later need that oil because of a crisis, they cannot have it.

Clean or Renewable Energy Development in First Nations Communities

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities

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One participant indicated they need more time to review their data, targets and objectives and will respond to this question in a few weeks.

A participant stated that some of their members First Nations have remote communities so there is definitely an interest in developing renewable energy to replace diesel generation.

There was also an interest in First Nations being developers, builders and operators of clean energy and would like to see how BC Hydro can help facilitate this. The participant noted that they would like to see BC Hydro offer assistance on a small scale and a larger scale. If their community wanted to build a wind turbine, BC Hydro could offer assistance. If First Nation was interested in larger scale wind farm BC Hydro could be an advisor and talk about the implications.

One participant indicated there are 200 plus homes that are being managed by the First Nation, many living below poverty. The concern was the cost of housing and the attention on providing more housing and better housing. Clean energy is not in their budget. The participant would like BC Hydro to provide studies on their homes and make some improvements.

The number one thing is developing capacity and then after that they can look at clean and renewable projects. There needs to be programs to educate First Nations on clean and renewable energy.

Concern was raised about the time and resources that go into hiring someone to help with the energy kits. Putting in the energy kits is not something that can be implemented tomorrow. First Nations need resources and capacity building to make this happen. They do not have engineers, land-use planners, etc. working with them. They have to outsource those professionals.

There was an interest in seeing more First Nations working with BC Hydro and for BC Hydro to reach out to communities and allocate resources for this. Installing the energy savings kits was of limited value in terms of costs savings. The big value was the capacity building. It enabled the housing manager to engage with its members to demonstrate what is being done for the community. It was noted that this is important.

One participant explained, the band is a government agency, and their members look to them for assistance. As a band, they have the ability to influence and have the potential to be a big force. There is potential to work with First Nations and you can get a block of influence and buy-in. Energy saving is important to them, and their members agree, but there are other basic needs that trump this. There is a need for BC Hydro to work with them on that type of level.

A participant stated that they would like BC Hydro to reach out to communities and then allocate resources.

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Additional Comments

Energy Purchase Agreements

A participant suggested that BC Hydro be a part of the energy purchase agreement negotiations that take place between First Nations and independent power producers. The participant indicated that when you look at the scope of some of the proposed projects, a project cannot cover all of the impacts that come to an area and that BC Hydro should participate in those negotiations.

It was noted that First Nations do not want to waste time and energy with independent power producers whose projects are never going to be built.

Carbon Credits

A question was asked whether BC Hydro would be looking at trying to get revenue from carbon credits. The concern is that a Nation that may be looking for revenue sharing wouldn't want to see BC Hydro getting carbon credits or the proponent to get that. There are others out there that have a carbon stock market and the concern is that First Nations may get hit by that.

Attendance at the Workshop

A participant indicated there are seven other First Nations who are not here today but this does not suggest they have no interest in this topic. Many do not have the capacity or staff levels to attend these sessions. As well, letters and messages do not always get to the members.

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for follow up purposes.

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1. Provide an electronic version of the First Nations Input Form which can be completed and sent in electronically.
2. Provide GIS data with information on right-of-ways.
3. Provide information on transmission lines – which are independent power producers' and which ones are BC Hydro lines.

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

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BC Hydro Integrated Resource Plan: First Nation Consultation

Abbotsford – March 4, 2010
Ramada Inn & Conference Centre

First Nation / Organization Attendees

Cheam First Nation	Skawahlook First Nation
First Nations Energy and Mining Council	STO:LO TRIBAL COUNCIL
First Nations Summit	Tsawwassen First Nation
Katzie First Nation	Skatin Nations
Leq'a: mel First Nation	Skawahlook First Nation
Matsqui First Nation	Soowahile Indian Band
Samahquam	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Nadja Holowaty	Energy Planning
Danielle Van Huizen	Note Taker

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Dan George	Four Directions Management Services
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The presentations were followed by facilitated discussions lead by the neutral facilitator, Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

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Participant Input

Consultation Process

There were several comments made regarding the development of the Integrated Resource Plan and the corresponding timeline as follows:

- The facts are similar to what was referred to in the court decision in Haida involving a strategic plan because the Integrated Resource Plan is a strategic level plan it can influence future decision-making.
- A participant stated you cannot have higher level plans without knowing the lower level plans.
- Participants expressed disappointment with the Province and BC Hydro for having such an aggressive timeline for such a big plan. It was questioned how First Nations are supposed to respond to BC Hydro within the timelines. They would like to see better engagement.
- It was stated that this plan is a high level government decision and should be made between the Chiefs and government as they are the ones mandated to make the decision. The participant stated that BC Hydro is only interested in developing assets

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and making money and that it is unbalanced and that it is an unfair relationship with First Nations.

- A participant noted that this issue needs to go to their political table so First Nations can unite and decide on what they want for their community as a whole.
- It was stated that there should have been a session before the current one. It was also noted that there is too big of a time gap from the meeting and comment period to the release of the draft plan for comment. The participant stated another step was needed, whether that is information sharing, workshops, etc.

A participant stated that when you are talking about consultation it typically means impacts and therefore they want to understand what the impacts and the benefits are to First Nations.

There was concern raised because whether this process is high level or not it is believed that it will impact title and rights and it has the government and BC Hydro making plans on land that is not theirs. It was indicated that crown corporations need to directly engage with First Nations.

It was also stated that no solutions to past plans and their impacts have been provided, but now BC Hydro wants to discuss future plans. There are power lines chopping up First Nations' territories without benefits to First Nations. It was stated that members are losing hydro and paying fees, and then there are large transmission lines crossing First Nations land. It was stated that, at times First Nations have no power.

There was a significant objection to the process as follows:

- Participants noted that this is not consultation but rather information sharing.
- Consultation is not general especially at the territorial level.
- One participant was uncomfortable coming to something called "consultation" when there is not a project or plan that exists. On the other hand another participant was happy and appreciative that the meeting was occurring before a plan was put together.
- The word "consultation" has legal components to it and BC Hydro needs to understand the legalities of that term.
- BC Hydro should tell the communities exactly what policy basis consultation is being conducted on and it is important to hear from BC Hydro what the policy of consultation and accommodation is.
- Individual First Nations may have different meanings of consultation.
- Workshops are not consultation.
- First Nations do not have the capacity to evaluate the technical information and it is frustrating. Informed opinions are based on the capacity to look through the technical information.
- The *Clean Energy Act* made the British Columbia Utilities Commission process unavailable to First Nations.
- A participant stated that this is a simple approach to a very complex issue and this does not get to the heart of First Nations' people truly appreciating the impact this has on their land. It was stated that the participants in the meeting will have to meet with their members to explain to them what we are doing today and that will raise more questions. The participant understood what BC Hydro has to do but commented that it seems so little for such a big project. The participant noted that BC Hydro refers to this

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as consultation and that BC Hydro is trying to understand First Nations interests. The participant was worried that the participants are on the record being at the workshop and it may look like the participants agree on the depth of the issues, but they are not doing that here. It was stated by one participant that the people have been invited to do something here today and the participant does not think that has been done.

Several participants set out their expectations regarding consultation as follows:

- There were questions about the resources available to review the draft plan and the assistance being provided by BC Hydro to individual First Nation communities.
- A participant stated that it was not possible to capture enough information from the session. It was stated by the participants that their Nation could fill this room with advisors and technicians but there is still a need to report to their community, so there needs to be capacity dollars to make it meaningful and provide direction.
- It was stated that there was a need to be involved in the decision making from a territorial level.
- It is important to have the Province here so First Nations can work on a revenue sharing agreement. It was commented that that is real consultation and the rest should be easy.

Conservation & Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

It was noted by a participant that households are being engaged in conservation and efficiency but businesses should be participating as well.

Information is needed on consumption in remote areas in order for their communities to understand what it takes to be energy savers.

There was concern that conservation and efficiency is expensive and unaffordable to many First Nations as follows:

- Many of their buildings do not have energy efficient appliances and they cannot afford those appliances or technology.
- To get First Nations on board and doing conservation in their communities there needs to be credit to First Nations for extra power or smaller bills.
- There was an interest in having the government consider a tax write-off to low income families for conservation rates.
- There was an interest in knowing where the funding is to bring conservation and efficiency to First Nations, and if there are funds out there First Nations will need better access to them
- A participant indicated that with the properties they own, they switched from diesel to hydro for the cost savings but it has increased the use of power. They would like to understand if there is funding or rebates available for upgrades.

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There was a question as to whether Canada Mortgage & Housing Corporation has any input in terms of renovations as First Nations' houses are very inefficient. There was an interest in bringing First Nations' assets up to par to be a part of the conservation goals.

There was concern with the inequitable impact that rate structures have because First Nations families living in a home tend to be larger. First Nations' households have a higher usage because they have larger families and inefficient homes. There needs to be a conversation about the inequity in a tiered rate system.

There was concern with the health hazards associated with electricity and electro magnetic fields from transmission lines coming close to their communities. A participant also referred to the existence of "dirty electricity" in a house and which causes buzzing in a person's blood stream. It was noted by the participant that BC Hydro's presentation did not address this issue. The participant offered to share a study they had been involved in for those participants who are interested. It was stated that if BC Hydro is aware of health hazards then they can protect communities and be more conservation oriented.

There was an interest in having BC Hydro consider the differences in world view as First Nations see these resources as life to their Nation, a gift. Resources are not something that can be taken without giving anything back and there is meaning that First Nations attach to the resources.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

A participant raised a concern about the health of the people with pace makers and for people's mental health. There was a concern with the potential electricity buzzing in the atmosphere from the electric cars and their plug in stations and how the electrons emitted in the atmosphere may have an affect on weather patterns and the number of electric storms. This needs further study.

A few points were raised around the evolving technology in electrification as follows:

- It was indicated that it is tough to be investing in infrastructure if you do not know what the winning technology will be, for example an electric car or hydrogen fuel cell. There has to be some caution in the approach because you would not want to invest so much money in infrastructure only to find out later that there is a cheaper and cleaner alternative.
- There was an interest in having BC Hydro look at energy storage as there is technology being researched for efficient and non toxic batteries.

One participant spoke about the "big picture" issue on what can be done to save the planet. If it means making electric cars affordable then let's do it. If that means a mandate for technicians then this also should be done.

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There were concerns raised around the waste and other impacts associated with electrification as follows:

- There may be a reduction in the environmental footprint, but possibly not a reduction in waste. The short lifetime of lights were provided as an example of waste. In addition to the waste, there are safety concerns with the old light bulbs. They want to look at the whole process not just how and where to manufacture.
- There was an interest in having a program or a place that will take back the light bulbs.
- There was concern about the lifetime of the battery and how that might end up in the landfill and the huge environmental issues that First Nations have with the potential mass production of toxic materials and battery waste.

There was concern that with greater transmission of electricity, the greater the impact on First Nations.

There was an interest in having more affordable electric cars.

It was noted by one participant that the next generation will have to deal with the bigger problems. There is a need to understand where carbon emissions are coming from what the carbon emissions will do to our next generation. The participant stated there was a need to prevent the suffering that will occur. If the government is trying to help out it needs to be about affordability.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation.

It was indicated that as First Nations they will rally behind those First Nations in the area of Site C who are opposed to the project.

There were a number of concerns raised amongst the participants of the perceived lack of acknowledgement of their title and rights when talking about resource options and their attributes as follows:

- It was stated that it is important to be mindful that the resource options referred to are on the land that First Nations have title and rights on.
- There was no mention of First Nations title and rights when BC Hydro listed the criteria for future resource development.
- It was indicated that if you are talking about real world scenarios then title and rights must be addressed. There is a defect in the economic assessment.

Participants were concerned with the potential impacts that are associated with the renewable options as follows:

- There was concern with pursuing wind farms as the land may be destroyed to put up wind "fans". The concern is that cutting down the trees may affect the air quality and the carbon in the air.

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- It was stated that the assessment of a project should not be about the impact that occurs in a certain area but be inclusive of the surrounding areas that may be affected as well.
- There was an interest in BC Hydro taking into consideration the social impact.
- The input into the portfolios must consider the indigenous worldview where money is not the biggest driver. First Nations perspectives need to be on the table. Industry is driven by the fact that money will offset any impact but First Nations do not believe that.

Feedback was received on Example Portfolio 1- Renewable Mix without Site C - A participant believed there is potential benefit but understands there is a higher cost that is associated with it and there is a concern as to who will bear the cost.

Feedback was received on example Portfolio 2- Renewable Mix with Site C as follows:

- “Hell no”. Portfolio two should not be considered as their community supports the people in the area surrounding Site C.
- From a technical perspective, the participant believed that Site C is not good for B.C. and should not be considered as there are too many impacts.
- Another participant will ask their community about the option.
- One participant stated that the pros of Site C are listed but not the cons.

Feedback was received on example Portfolio 3 – Renewable Mix with Site C and Gas-fired Generation as follows:

- There were questions about how the energy from Site C may be routed throughout the province and whether that would require upgrading of the transmission lines. Everyone needs to understand the implications of the portfolio. A participant stated they did not want any more lines or towers around.
- It was expressed that Site C is devastating because of the impacts of reservoirs. A participant questioned the trade-off of the price of hydro and its socio-economic impacts. The suggested approach was to look at this holistically. The further you require energy the more you impact communities that are away from the demand. It was pointed out that a project starts in one place, but it ends up spreading out in other areas.

Transmission Planning

BC Hydro would like to understand First Nations’ perspectives on whether BC Hydro should take a proactive approach to transmission planning.

There was a concern about the potential future impacts if there are high tension lines going through the land.

One participant liked the proactive approach but with some qualifications:

- The trade-offs for the ratepayer should be considered.
- If the power lines are larger then the participant would not like it.
- The rate for electricity should be lower when a transmission line goes through a traditional territory.

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Another participant did not believe they were qualified enough to comment on the approaches and required more information to be fairly engaged.

A participant noted that it appears the proactive approach is more efficient, more durable and probably requires less maintenance. It was noted that this involves installing foreign objects into a First Nation's territory. If revenue sharing is involved First Nations might look at this from a different perspective. The approach should be to partner and work together to see how to cut back on emissions and own this together.

There was a concern that the costs of the proactive approach are being overstated. It was noted that BC Hydro can be proactive and plan to accommodate a higher load as opposed to proactively building transmission. Also, eliminating right-of-ways is a cost savings.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

A participant indicated that many people may see this policy as an activity by which the Province will make more revenue, which may result in more focus on First Nations' resource base.

A comment was made that it appears the idea is to conserve so the Province can generate more energy for export.

It was indicated that if the resources will be generated from First Nations' lands, First Nations should have a portion of those revenues. It was believed that there are too many impacts from existing dams and now there is a potential for the Site C project.

There was concern with the current contracts in place with independent power producers and what happens when those contracts expire. The participant was disturbed that there is no guarantee that the independent power producers will sell their electricity to BC Hydro, but could sell it to the highest bidder. This could result in higher BC Hydro rates.

Export was supported by a participant if BC Hydro and First Nations had a partnership agreement on shared revenues. Later, when B.C. has more demand due to population growth (and when the U.S. starts generating its own electricity) the electricity previously exported can be used for domestic purposes and it will be cheaper.

As long as the export market is not tied to the North American Free Trade Agreement (NAFTA) or other agreements that will tie up BC Hydro and cause significant affects to First Nations' rights and title, the participant could support it.

Clean or Renewable Energy Development in First Nations Communities

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities.

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There was interest in clean or renewable energy in one participant's community as they have a biomass project happening close to them. It was noted that it could be a lucrative project, perhaps not for their community but for the surrounding area. The participant wanted to understand what the First Nation will get out of it and believed it will most likely be jobs.

A participant stated that they have absolutely no power and their community is talking about how they can begin to embrace the opportunity of clean energy without being part of the grid.

A participant shared that the electricity switch was turned on for their community a few weeks ago. There was a question as to why BC Hydro could not develop green energy in their community as part of them recently getting hooked up to the grid.

The BC First Nations Energy and Mining Council spoke about their work in biomass projects and offered information to those who were interested.

There was a comment that there needs to be more money available in order to start First Nations involvement in the energy sector. First Nations need revenue sharing in power projects. It was noted that there is only \$5M available (through the First Nations Clean Energy Business Fund) which is less than what is needed to generate a revenue stream for a First Nation community.

It was stated that there needs to be more government-to-government relationships for revenue sharing and accommodation.

Additional Comments

Environmental Assessment process

One participant stated that the Environmental Assessment process is not a viable decision-making tool and is not recognized as a viable standard from the standpoint of First Nations. The First Nation experience is that the process is designed as an approval process for the Province when it should be about how to do a project. It was believed that the process has only declined to approve one or two projects. First Nations are taking the initiative in developing their own land use plans. One participant stated that they are developing their own higher standards for land use at a territorial level to make sure areas are protected.

BC Hydro's Power Acquisition Process

A participant noted that First Nations are the ones having to sort out the "riff raff" in the BC Hydro call process. There needs to be capacity provided to First Nations during BC Hydro's power acquisitions processes because they use up First Nations' resources and time.

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC were given an opportunity to share with the group who they are, what their mandate is, background on the council itself as well as their presence in the Integrated Resource Plan process. Their mandate is to develop energy policy and to speak on First Nations issues and

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opportunities. Specific to the Integrated Resource Plan process, the BCFNEMC will attend all nine sessions for the Integrated Resource Plan. Their objectives are:

- To speak to issues or formulate positions on issues and perspectives that are relevant to all First Nations;
- Support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for follow up purposes.

1. Circulate the list of attendees to everyone with their email addresses.
2. Information on the process for obtaining a right-of-way on a First Nations reserve.

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

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BC Hydro Integrated Resource Plan: First Nations Consultation

Kamloops – March 7, 2011

Coast Canadian Inn

First Nation / Organization Attendees	Name
Adams Lake Indian Band	Nooaitch Indian Band
Xwisten (Bridge River Indian Band)	Splats'in First Nation (Spallumcheen)
Canim Lake Band	St'át'imc Chiefs Council
Canoe Creek Band	T'it'q'et
BC First Nations Energy and Mining Council	Xaxli'p
BC Hydro Representatives	
Charlie Weiler	Project Manager, First Nation Consultation
John Rich	Energy Planning
Danielle Van Huizen	Note Taker
Neutral Facilitator	
Dan George	Four Directions Management Services

Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan & How is it Developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro's plan to meet the province's future electricity needs. John Rich then provided an explanation of how BC Hydro's Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro's presentation for their reference.

Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

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- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?
- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations' interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the Integrated Resource Plan: First Nation Input Form. Additional reference information was also provided in the Planning for a Clean Energy Future workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note-taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Consultation Process

There were several objections to the consultation process noted by participants:

- It was expressed that this was not consultation, but information sharing.
- One participant indicated that the process and context of consultation has evolved and there needs to be a preliminary meeting to discuss the issues and interests and indicated that this process does not do that. The participant stated that it should be about sharing plans and what their impacts are and talking about how to avoid these.
- One suggestion was for the conversation to start with: "this is what we know are the impacts of these projects and given what we know so far what should be the next conversation?"

One participant noted that there was no discussion with First Nations before the meeting and this has been thrust upon them with no opportunity to provide input on the process.

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One participant had several issues with the consultation process noting that First Nations are in tough economic times and that there needs to be more funding available to provide input and to be meaningfully engaged. The participant stated that the rates for consultation were insulting and disrespectful considering that the participant understood there are Chiefs and Councilors present in the workshop whose charge out rates are \$600-800 per day. The participant considered the overall amount of funding insufficient and sought the following: a payment table developed with senior policy people or Chiefs and Council members having different payouts; funding for travel time; and, funding for preparing written comments

This same participant also expressed frustration over the complexity of the information provided by BC Hydro and the expectation for First Nations to be professionals in hydro electric energy. The participant stated that this was an unfair process noting that they have spoken about scenario development and could provide technical support. The participant also stated that BC Hydro needs to bring this to the participant's community and get feedback on this planning. The participant noted that this needs to be done before the draft plan is done otherwise this is just lip service.

A participant spoke about the importance of relationship building and the level of relationship building that can occur in this forum compared to other forums. The participant indicated that there needs to be awareness and capacity building for there to be meaningful feedback.

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

It was indicated that First Nations buildings and homes will not meet energy efficient building codes and that there is a concern that if technology and building standards become mandatory First Nations might have to bear the cost of the upgrades.

It was suggested that education around conservation needs to begin at an early age and there is a need to introduce programs into their elementary schools. The information about conservation needs to be available to households and accessible to everyone. People need to understand why there is a need to conserve and the importance of it; the more energy consumption the more impact to First Nations land, birds, and traditional areas.

The regionalization of rates was proposed. Those who consume more energy, such as those in the Lower Mainland, should pay higher rates because their demand causes large hydro projects to be built and those who suffer greater impacts to their land should not have to bear the high rates. A participant indicated that First Nations already pay enough through the impacts to their land and declining fish stocks. The participant would like BC Hydro to look at regional consumption and how that weaves into regional generation.

Participants were concerned about the commercial and industrial users who have their lights on all the time and what BC Hydro is doing about that. They indicated that their band offices lights are always off when they leave.

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Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

A participant expressed concern about using electricity as an alternative to fossil fuels. The participant indicated that hydro electricity and its associated impacts is not the answer to the issues associated with the use of fossil fuels.

One participant challenged BC Hydro for not having more electric vehicles. The participant stated that BC Hydro did not practice what it preached.

A participant stated that they were not opposed to electrification, but is concerned about increased rates. Rate increases will impact their community as they are well below the average wage scale of mainstream society. It was stated that electricity rate increases affect First Nations people a lot more than it affects people in Vancouver.

Participants had concerns with the relevance that electrification has in their community as follows:

- One participant questioned how they can promote electrification in their community when the examples given (heat pumps, electric cars) are not relevant to them. They are a small community and are not on the grid. The participant proposed starting at the grass roots.
- A participant stated that the electrification approach is based on a Lower Mainland approach as electric cars mean nothing for their community. The participant stated that BC Hydro should be considering other options besides electrification.
- A participant indicated that electrification may be right for the Lower Mainland, but it is not right for the participant's community. Electric cars mean nothing to them. Their situation is very different. It was suggested that there should be other technology options, aside from electrification.
- A participant raised the concern that the objective of reducing greenhouse gas emissions imposes the solution onto the communities.

One participant was opposed to electrification. It was suggested that rather than spending money on an electric vehicle it could be spent somewhere else.

A participant indicated that their hydro bill is very high due to the distance of their house to the rest of the community and the system for pumping water they have in place. The participant would like to see more support from BC Hydro.

Several concerns were raised that electricity generation disproportionately impacts rural communities to the benefit of the Lower Mainland as follows:

- Demand exists in the Lower Mainland, but the impacts will be in rural communities. If electricity generation is increased to meet the needs of population growth most would

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say that it is a good thing, but there are relatively few people who bear the impact. There needs to be some way to reconcile the impacts and benefits.

- A participant stated that BC Hydro will do what is best for business. The concern is that when Greater Vancouver needs the power it will impact the smaller communities. The impact will affect their community more than the Greater Vancouver whether it involves building a new dam, expanding existing transmission rights-of-way or new independent power producers. It was noted that when the water is affected it affects everything on First Nations' lands.
- A participant would like BC Hydro to consider the benefits for First Nations as they are the ones that are impacted. If there is no benefit then why should First Nations buy-in? The basic benefits are infrastructure (such as the quality of roads for communities) and these are not being considered.
- Another participant indicated that electrification met urban needs and not rural First Nations' needs.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation

One participant stated opposition to independent power producers (which the participant considered to be part of BC Hydro) coming into their territory to build new projects. The participant indicated that their First Nation keeps saying no to these projects, but they keep receiving referrals. This type of activity will alienate their land and impact their key hunting territories by opening up the roads. Run-of-river projects are being considered a renewable resource when salmon populations are suffering and it interrupts nature. They have lost enough fish already and they have no more land left to alienate. There was a concern that water is becoming a commodity. They do not want wind or hydroelectric power in their territory.

A participant raised concern with projects and transmission lines coming onto their land and chipping away at their title and indicated that this needs to be acknowledged and spoken about. This has a cumulative impact of First Nations' title. It was stated that First Nations hold title and need to express that. A participant said there was an interest in reaching a deal and it was expressed that the door was open to implement something.

The issue of reliability and the costs associated with having reliable energy was raised. There is a cost to rural First Nations communities in terms of the environmental footprint.

Several concerns were raised about the need for more information on portfolios and there was caution expressed about sharing preferences on the example portfolios as follows:

- A participant stated that the portfolios reflected the BC Hydro perspective which is not relevant to their community. In order for the portfolios to be useful they must include cost, length in kilometers of transmission lines, socio-economic impacts, community and environmental impacts. The portfolios need to indicate how they impact the province; region and community and then it can be taken to their community for input. The

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participant stressed their views are different from BC Hydro's. The participant believed BC Hydro has ranked options based on cost, but in their community it is the environmental, social and cultural impacts that are important.

- There is an interest in seeing an assessment of the scenarios/portfolios to determine the best fit, if they are going to result in a lot of activity in a particular territory and to see how it relates to the big picture.
- There was a question about the impacts of a portfolio on a specific community.
- It was also noted that there is no funding from BC Hydro so that participants could relay this information back to the community in a meaningful way.
- It was indicated that it is premature to weigh in on the example portfolios. This can be explored later when BC Hydro provides them with more information and that participants do not want to misconstrue that they may be choosing an option when they do not have the information they need.
- One participant stated there was a need to be cautious and chose not to give any input. The concerns expressed included that the information is complex, the participant was not informed, and information has already been developed without First Nations' input. There was a concern that input would appear to be consent. It was noted that the participant's mandate comes from the community.
- A participant stated that the portfolios seemed a bit like a negotiation and chose not to give input.

Participants expressed concern with the process of developing the portfolios.

- A participant speculated the draft plan would likely not include what their input is in the portfolios as the draft plan may already have 90% of the decisions made. The participant feels that this should be their chance to learn the options and to go to their community so they can come up with options for the draft plan.
- It was suggested that BC Hydro will not get an agreement or buy-in on a renewable mix.

One participant noted that they would like decentralized electrical generation to be considered. It was pointed out that this may be a viable option for promoting the Lower Mainland to be more self sustainable and have individual houses generate their own electricity as this will reduce the demand for generation outside of their region. One suggestion for a decentralized source of electricity was solar panels on roofs.

It also was suggested, given the huge impacts of transmission lines, regional consumption and generation requirements need to be looked at.

Example Portfolio One: Renewable Mix: A participant would like BC Hydro to take into consideration the scope of all First Nations' traditional territories and where these power sources will come from, as well as build capacity and allow for new technology. The participant would like to have First Nations involvement in installation and ongoing maintenance.

Portfolio Option Two: Renewable Mix with Site C: There was concern expressed about the impacts Site C will have on the Peace region. They want to understand what other communities' issues and concerns are on a portfolio.

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Portfolio Option Three: Renewable Mix with Site C and Gas-fired Generation: A participant thought that gas fired generation may have a place in terms of having a flexible generating unit. If it decreases the transmission lines, saves one river from being killed by a dam, and if it is used as an interim measure then the participant would agree with it.

Some participants expressed interest in considering biomass projects. It was indicated that this technology can burn waste and make something useful of it. One community has been looking at how they can generate power by burning biomass and then selling it to BC Hydro.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

One participant indicated that DC transmission lines have less impact on the environment than AC transmission lines. The participant indicated that there needs to be an understanding of the advantages and disadvantages of AC vs. DC transmission lines. It was suggested that old heritage lines could be replaced with the DC lines, which may save money and electricity. The participant stated that this should be included as an option and that First Nations deserve to hear about it.

A participant noted that they would like to see minimization of new transmission lines and the length of the transmission lines because the length creates electricity losses, which leads to waste and they do not support waste.

A participant would like to see strategic planning into where the lines will never go, for example, migration routes or bear habitat, that way independent power producers will know that they will never get power out of that area.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

One participant indicated the current approach to selling electricity to other jurisdictions is probably okay, but was opposed or hesitant with building electricity generation for the purpose of export. This involves viewing water as a commodity with a price on it. This approach will start taking for granted the hydro dams that are already there.

There was a concern expressed about the legal and policy implications of exporting electricity to the United States particularly in light of the North American Free Trade Agreement. It was recommended that someone with a legal background look into this.

There was a concern that export of electricity sends a message to California that they can use as much energy as they need and when they run out, they can look outside for energy. There is a lot of waste associated with this approach. It is also inconsistent with a conservation objective. The participant indicated that there is a need to "practice what we preach".

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A participant was interested in knowing the volume of electricity exports and how many projects are being considered for export.

It was noted that there was nothing in the material which set out how much BC Hydro would earn from export and there was an interest in knowing this information.

One participant stated, that if the power is being generated in a specific region, BC Hydro should have a conversation with the local First Nation community, Powerex and the Province, as a third party, to determine where the money goes.

Clean or Renewable Energy Development in First Nations Communities

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nation's communities.

First Nations are interested in looking into biomass as a source of energy because they see potential opportunities.

It was suggested that BC Hydro's size requirements for biomass projects seem very low. There was a request to have a separate power acquisition stream for First Nations because, in many cases, First Nations are not able to find partners until too late and are not able to take advantage of the opportunity.

A participant indicated that their community is working with BC Hydro on a pilot project for off-grid remote communities to see if they are eligible or feasible.

Additional Comments

Impacts on First Nations

A participant stated that salmon is important to their way of life and a decline in water and salmon stocks is a concern for their food supply, and food is money for their community. The participant shared the decline in the number of fish that their community has experienced and the impact this has on their people.

A participant was concerned about the impacts of BC Hydro's activities on the lives of those affected and not just impacts from a business point of view. First Nations people are one of the fastest growing in BC, up there with immigrants. These kinds of activities affect us greatly, 10 times more than any urban center. The participant wanted to see some tangible results come out of the meeting today and not just another session they attend.

Capacity

A participant commented that the band council is changing all the time and that there will be a new person from their community attending the next session. This makes it difficult.

A participant appeared overwhelmed and questioned being there. The participant said words to the effect of: I want to hear more from the Chiefs and leaders. Sometimes I am afraid to say something. Are we talking to a giant? I don't know what to say here, but hearing about our fish

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and land I think about the last time we will see the fish. We see hydro lines going up and this just stays in my mind. Can we do this, do we have power? What am I doing here?

Another participant responded that we do have the power as First Nations around this table. This is why we have to state clearly that this is not consultation. Consultation has to be in a different form. We need to talk about the process for this to unfold. There are court cases that say First Nations have rights and title. We wouldn't be here today without these cases. In terms of these issues that are emerging that is why we are here today. Today in this dialogue we are searching for a way to deal with First Nations. We need to create that process in this province. We do have power.

Attributed Comments

I have concerns with this being First Nations consultation. We are not here for consultation. We understand this to be information sharing. The obligation rests somewhere else, not here. – Harold Harry, *Canoe Creek*

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation.
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

During the meeting the following information requests were made and have been recorded here for follow up.

1. Circulate the registration form to everyone.
2. Information about permits for hydro on reserve lands
3. Electronic copy of the input form and presentation.
4. Want a table of notes showing our feedback and what your commitments are so we can see what you have done with our input.

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Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

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BC Hydro Integrated Resource Plan: First Nations Consultation

Vancouver – March 11, 2011

SFU Segal Centre, Rix Room

First Nation /Organization Attendees

Bonaparte Indian Band	N’Quatqua First Nations
Chawathil	Old Massett Village Council
Chehalis Indian Band	Skii km Lax Ha
Xa’Stsa (Douglas) First Nation	Sliammon First Nation
BC First Nations Energy and Mining Council	St. Mary’s Band
Heiltsuk Nation	STO:LO NATION
IN-SHUCK-CH TRIBAL COUNCIL	Tl’etingox-t’in Government Office
Lower Nicola Indian Band	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Nadja Holowaty	Energy Planning
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan and how is it developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro’s plan to meet the province’s future electricity needs. Nadja Holowaty then provided an explanation of how BC Hydro’s Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro’s presentation for their reference.

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Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?
- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations' interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note-taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Consultation and Process

It was acknowledged and appreciated that BC Hydro has met with First Nations before the plan has been created but there was concern with the consultation process.

Many participants stated that they did not consider this consultation. It was stated that this was more of a workshop and not consultation. This is a good start to consultation, but not sufficient.

It was stated that if you treat First Nations respectfully you will get that in return.

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Participants identified matters that needed to be considered in consultation

- It was questioned how BC Hydro is able to have discussions with one First Nation if another First Nation with an overlapping territory has not had an opportunity to participate. Shared areas or overlaps need to be considered.
- Article 32 of the UN Declaration of Indigenous Rights must be considered in consultation.
- First Nations are unique and that needs to be remembered.

There were several comments about what consultation should involve:

- A participant stated that consultation and accommodation go hand in hand and if we are talking about consultation we need to talk about accommodation. It was also noted that this planning process may result in BC Hydro expanding projects or building new ones.
- If we are talking about impacts and infringements then we need to talk about revenue sharing. True consultation involves discussion of revenue sharing. The message needs to be delivered to the province.
- True consultation is not being achieved when talking to BC Hydro staff. It was stated by one participant that a lot of what is being asked is a bit technical. There is an interest in consultation at a political level. BC Hydro executives and someone from the government needs to be at the table.
- It was indicated that BC Hydro has a legal duty to be compliant in consultation and accommodation and if there is the potential to export energy and make money off of it BC Hydro should acknowledge the legal duty to consult and accommodate which means revenue sharing with First Nations.
- Consultation means coming to the First Nation's community. Have the top people from BC Hydro sit with the top people from a First Nation and converse— not consult. There needs to be a level playing field from beginning to end.
- There should be a Chiefs working group for this project. This would get a lot further because it would be more political.
- A participant stated they do not want to be included in the public consultation process. They want their own deeper consultation where traditional use is included and they want to be sure someone is accommodating that.
- There was a need to know the footprint up front so we can assess the impact.
- There was a need to engage with local provincial and federal government. It was thought that their leaders need to be talking to the Ministry level of government so they can make fully informed decisions.
- There was a request to see smaller groups included in the process and have consultation happen with the land owners and not with top government. All First Nations need to be included. There was a concern that some processes exclude smaller groups.

It was indicated by one participant that they will not talk about plans until the grievances of the past have been addressed, such as the impacts they have experienced from the Columbia River and the disappearance of the salmon in that area. There is a need to sit down and talk about how that will be addressed.

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Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency

It was asked whether there is a financial reward for people to be more self-sufficient. Their community is working on bio fuel and solar energy in the hopes of reducing demand.

From a community development perspective, there was concern with the costs that may be associated with this objective. First Nations employment consists of low paid jobs. On their reserve they have social welfare. Their people do not care about the hydro bill because INAC pays for it. It is in their interest to provide life skills.

One participant supported greater conservation and efficiency but wanted BC Hydro to provide resources to the community so they could put energy efficient things in their homes, such as energy efficient appliances. It was noted that the homes on their reserves are below general standards, including the new ones that are being built. It was further noted that if BC Hydro is looking at conservation then this will need to be met at the community level for them to support this.

It was noted that the overall principle that guides their community, as stewards of their lands, is to be sure there is as little a footprint as possible and to think about how decisions might impact future generations. They do not want to see more dams or expansions of transmission lines because that will impact the land, wildlife and cultural heritage resources

There was appreciation for the LED lighting for the Christmas lights. These were noted to be cheaper, but it was stated that BC Hydro is marketing efficient light bulbs that are too expensive.

There are concerns that the energy efficient lights have mercury risks and that the waste from these light bulbs impacts wildlife and people.

There was an interest in programs for commercial buildings to use solar power to reduce their demand.

There was a request for BC Hydro to provide money to Indian and Northern Affairs Canada (INAC) to be used for efficiency upgrades in First Nations communities.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification

There was an interest in electric trucks. One participant noted that cars are not capable of making it through to their community.

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A participant questioned the trade-off between reducing greenhouse gas emissions versus expanding the impact on the land in order to support the generation of electricity. There was a question about what would provide the best pay-off.

A participant questioned the goal of reducing greenhouse gases when there are coal mines being developed in the North and was interested in knowing the trade-offs and policies associated with this.

There was some opposition to electrification if it meant increased electricity rates.

There was strong support for electrification by one participant, who noted that it should be paid for by those that use electric cars and not a burden on those that do not. The participant suggested conducting a market study for the user.

There was concern that by increasing its rates, BC Hydro is trying to monopolize the industry.

It was suggested that electrification should be something that comes from government not BC Hydro. It was stated that the *Clean Energy Act* is requiring BC Hydro to proceed with electrification.

There was a suggestion that the tourism industry adopt electric cars.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation

There was a concern with the potential for clusters of Independent Power Producers projects on a single creek.

BC Hydro needs to consider that First Nations communities are not economy based, but there are costs to running a First Nations community. If costs go up we need to find ways to make it work. There was an interest in seeing improvements without First Nations inheriting the costs.

It was raised that the territories that are around the Site C dam would like to be accommodated and that this forum should not reflect a consultation on the Site C dam.

A First Nation trend identified was the local management of resources. There are challenges with local management of their own resources and barriers to self sufficiency. It was felt that this is the result of the Ministries not communicating or their different mandates.

Participants expressed interest in several different resources:

- One participant advocated tenure for biogas to help achieve self sufficiency. The participant believed that the inventory for biogas is out of date and needs further investigation. It was also noted that biogas is interim as there is only so much waste.

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- One participant suggested that run-of-river and pumped storage be combined.
- There was an interest in hydrokinetic energy and a need to understand the dependability of the equipment.

There was an interest in taking a regional approach to portfolios:

- The portfolio will depend on who you talk to and where they are. It varies amongst all regions.
- A participant noted that it was premature to come up with these portfolios. It will depend on the area of the province.
- Depending on the area, biomass could be a huge resource whereas run-of-river may not be a consideration.

One participant stated there would not be too much opposition to things if there is meaningful participation and inclusion of First Nations in the development of the resources. One participant noted no preference for the type of resource to be developed but wanted much earlier inclusion of First Nations on the affected territories. It is when developments are done behind the scenes and tenures are already gone when First Nations become involved that there are issues and anger on the part of First Nations. It is disrespectful to be brought in at the thirteenth hour where First Nations can only share a small portion of the project.

Portfolio Option 3: Renewable Mix with Site C and Gas-fired Generation, there was an interest expressed in gas fired generation. As well, the landfill has expired and they need to get the garbage out.

There was a concern raised that service interruptions will impact First Nations' communities. There is a need for dependable capacity which may mean different things to different nations and territories.

Transmission Planning

BC Hydro would like to understand First Nations' perspective on whether BC Hydro should take a proactive approach to transmission planning.

There was an interest in enhancing existing lines as it was thought this will also help meet the goal of conservation and efficiency.

There was a concern about maintenance done on the transmission lines. A participant believed that BC Hydro has transported noxious weeds during maintenance of the lines. The concern for their community is that the area of land in question is elk habitat and the noxious weeds will impact this habitat. The participant wanted BC Hydro to work with their community to address that.

Regarding BC Hydro's question whether transmission planning should be proactive vs. responsive, one participant stated that BC Hydro is involved in long term planning and will know what is going in each area, which should take care of the proactive issue.

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There was an interest to have BC Hydro acknowledge and deal with First Nations on the issue of traditional use.

Regarding transmission and road impacts, a participant asked whether there have been studies on the implications of steep terrain in areas where there are fish. BC Hydro was advised to have studies, which incorporate local knowledge, undertaken on this matter. There was also an issue raised with respect to reliability because of steep terrain areas. This may lead to technical questions.

There was a preference stated for BC Hydro to be more efficient by using existing lines as opposed to a landscape with a spider web of transmission lines.

There was concern with the Order In Council 1039 which was described by a participant as a government order that protects rights of way and roads that go through First Nations' territories. It was explained that notwithstanding these transmission lines were going through their community there was no electricity until the 1960's. It was noted that this is a contentious issue which affects the relationship with BC Hydro. The participant indicated that an agreement was signed on this matter, but there was a feeling that they were taken advantage of because of their poverty and their need for money for schools. The participant noted that the agreements should be updated and reviewed.

A participant was angry with BC Hydro because of a project that involves bringing a transmission line through reserve lands. The participant felt that BC Hydro was not interested in compensating First Nations for their short cut lines coming through reserves. The participant did not want the line in their backyard.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

Several participants noted that they would like to see revenue sharing in relation to electricity exports.

One participant stated that conversations on revenue sharing and water rentals have already occurred.

There was a concern noted that the revenue would flow to the province whereas they noted that First Nations as, title holders to the land, should have a stake in the revenue.

It was noted that BC Hydro was handling this as a commodity and not revenue sharing.

One participant expressed that the discussion should be about where the revenue sharing is coming from: BC Hydro, the developer, the rental income to the Province, or some other source.

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There was an interest in understanding the impact the goal of being a net exporter of electricity will have on First Nations title and rights. BC Hydro will get more money out of this and a participant expressed that there needs to be benefits or accommodation to BC from the export of energy.

One participant was concerned that BC will use export, which involves aboriginal interests, to pay down debt.

A participant expressed that export it is a scary reality for their community as it is about the types of energy that will be generated. They do not want to see any more dams when there are other energy sources, such as biomass. Their community would like to develop micro industries so they have an opportunity to export from the territory at a regional level.

A participant indicated that their community benefits from Independent Power Producers (IPP) projects, but if BC Hydro is looking at generating this resource for export purposes this will put pressure on the land and water in their territories.

There was an interest in developing solar, and in the summer, when there is more energy to sell it to BC's neighbors to the south.

There was concern with exporting electricity from independent power producer projects when there are communities in B.C. that do not have hydro.

Clean or Renewable Energy Development

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities.

From a First Nation's community development perspective, one participant noted that BC Hydro needs to look at the areas where independent power producers have had success with First Nations to see what else could be done.

A participant stated that First Nations consider the environment first and then the economics. The participant used the example of the Taseko Mine to explain that in that case the economics were considered first and then the environment.

It is important to ensure that benefit sharing is always addressed. However, a participant noted that the damage is already done so where is the benefit?

A participant shared with the group their community's success in reaching an agreement with a developer. It involved 7 years of negotiations. Impacts in the past were an issue. The agreement is confidential, but includes revenue sharing, benefits and contracting and employment opportunities. The fish is just about gone.

A participant stated that their community is not against clean energy but would like to be a part of it early on so we they not have to battle later. They do not want to be talking about revenue

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sharing after the fact. First Nations need to pressure the province to give BC Hydro the mandate to revenue share with First Nations.

There was a comment that First Nations have land use plans and ceremonial areas that they do not want impacted and they are concerned with the developers that come onto their land and try to do what they want. Instead of ignoring us, if developers would speak to First Nations early on we could tell them where and how to do their development.

There was an interest in clean energy for community development and in being economically independent. BC Hydro needs to understand the communities have their own process. The communities have their own governments which have to fulfill their duties. There is an interest in land and the environment and to keep it intact for traditional reasons. There is a time you have to say no. We have had to stop some forestry operations and an Independent Power Producer.

A participant thought that there may be a business opportunity for their community in collecting the efficient light bulbs to ensure they are not thrown in the landfill.

There was an interest in having more transmission related job opportunities for First Nations:

- BC Hydro can assist First Nations with their plans for the employment and training for their members. There is an interest in starting now before the project starts so they have time for training.
- It was noted that transmission planning and the BC Hydro employment strategy go hand in hand. As BC Hydro refurbishes its assets it should ensure that First Nations benefit from any opportunities that arise and be included in any business ventures.
- There was a concern that was raised regarding the lack of First Nations being contracted for clearing right-of-ways on their territory. There have been several requests to BC Hydro to contract that work to their members but it has never happened. BC Hydro should consider the level of capacity that each community has or does not have when BC Hydro is doing work refurbishing its assets.

One participant indicated they were on BC Hydro's preferred list of contractors. In that participant's community it got to the point where they did not have enough members to work. The best option is to find a reputable contractor and to work with them in a joint venture.

There were several comments by one participant regarding the lack of aboriginal opportunities with BC Hydro as follows:

- The community has not benefited from the contractors short listed to work for BC Hydro
- Nothing is being done for First Nations employment.
- They do not hear about opportunities until it is too late.
- It was noted that BC Hydro contractors should have an obligation to seek out First Nations labour and the suggestion was made to include a clause in BC Hydro contracts requiring a certain percentage of First Nations labour.
- There was an interest in leasing out land to BC Hydro for work.
- There needs to be training.

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Additional Comments**Power Acquisitions**

There is a need for developers to deal with First Nations issues. However, some proponents are not interested in consultation and fly under the radar. The key issues are the culture and history and traditional use of the land. The due diligence needs to come from the developer and at the cost to the developer.

It was pointed out that the *Clean Energy Act* and Standing Offer programs do not identify how to deal with First Nations and there needs to be a starting point for how to deal with First Nations so that they have an opportunity, through impact benefit agreements or other agreements, to know what is available to them. Foreign developers need to understand how to deal with First Nations and how to address the issues.

One participant noted that nobody has stepped up to the plate to find a better way to consult First Nations. The onus is currently on the developer, but this should be on BC Hydro. The participant suggested BC Hydro should develop those guidelines.

One participant raised concerns about the power calls being a “free-for-all”.

A participant added that BC Hydro needs to look at the options of how First Nations can have a stake in the projects. Where a First Nation has the capacity to finance its own project there needs to be an opportunity for the First Nation to participate.

One participant requested BC Hydro consider a First Nations only call. This participant noted that there are several First Nations that are in a position to move forward in developing projects, but without access to creeks and resources a First Nations energy call would be an empty one.

Land Use

It was asked whether BC Hydro has looked at First Nations land use plans that contain their traditional and ecological knowledge. It was noted that these land use plans have not been recognized by the provincial government.

One participant indicated they were not happy with the merging of the provincial and federal environmental assessments.

Columbia River Treaty

There was a concern that BC Hydro benefits from reservoirs on First Nations territory without compensation to First Nations.

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

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- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for following up purposes.

1. Electronic copy of the PowerPoint presentation

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

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BC Hydro Integrated Resource Plan: First Nations Consultation

Terrace – March 14, 2010

Terrace Best Western

First Nation/Organization Attendees

BC First Nations Energy and Mining Council	Lax Kw'Alaams Band
Dease River First Nation	Metlakatla Development Corporation
Nisga's Village of Gingolix	Nisga'a Village of New Aiyansh
Gitga'at Nation (Hartley Bay)	Skidegate Band Council
Kitsumkalum	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Nadja Holowaty	Energy Planning
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

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In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Consultation Process

There were several comments raised by participants regarding the consultation process.

- Participants noted that they do not consider this consultation but rather a time to learn about their interests as they pertain to the Integrated Resource Plan.
- One participant had a different view and stated full knowledge that they were being consulted as they are trying to open the area to their territory. They are a remote community and want connection to airports and electricity.
- One participant was not sure if this was or was not consultation. The concern was there was uncertainty with the process and if they give feedback that conservation is important, buried underneath that is a rate increase.
- The participant was worried where this process is going.
- A participant expressed the need for a government-to-government relationship and respect for what First Nations say.
- A participant did not consider this consultation because not all of the leadership of their community was present.

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- Proper consultation requires BC Hydro to go to their office (see attributed comments of Gary Alexcee below).

A participant raised an issue with the timelines of the consultation process indicating that there is not enough time. From their experience, it takes time to learn other opinions and to work collaboratively to find a solution. The participant would like to see this session as just an idea discussion and not consultation noting that this should be a time to discuss who, what, when, why, and where.

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

There were several concerns regarding the affordability of electricity bills for community members.

- There was an interest noted in having all community buildings be power smart but concern was expressed that changing from mercury lighting to energy efficient lighting is costly, and they would like to negotiate this with BC Hydro first.
- There was concern with the rate signals and whether they would be generically imposed or whether it would be something that could be adapted to meet the needs for each community.
- A question was raised regarding the rate signals for the commercial industry users as they have higher consumption. There was frustration with the level of consumption with Vancouver commercial buildings when it appears that conservation comes down to the residential users.
- It was noted that when a person finds a job and gets off social assistance they start getting billed for their hydro and are surprised by the amount. It was further noted that sometimes BC Hydro cuts power because a person is not able to pay their bill. Tiered rates do not help communities. Many members fall under the second tier where costs are high.
- There was a comment that the participant wants their elders to be able to afford their hydro.

A few participant raised concerns about meters:

- There was a concern about the accuracy of BC Hydro's meters and a statement that in some cases people have paid for more electricity than they have used.
- It was noted that people need to measure their consumption now so they can determine their reduction in consumption from power smart programs. Smart meters can do this. BC Hydro needs to recognize historical consumption reductions before power smart programs are in place.

Concerns regarding building standards were also raised:

- There was concern that the conservation approach may require changes to provincial building standards which may create a disincentive for new builds due to associated costs. It was noted that BC Hydro should consider improving their conservation initiatives to offset the costs of the new buildings as well as renovations.

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- It was indicated that a community is currently working with Indian and Northern Affairs Canada to have their buildings raised to national energy efficiency standards.

From a provincial perspective, a participant indicated that conservation and efficiency was excellent. However, from a First Nation perspective, BC Hydro needs to understand the social, cultural and economic incentives and desires within the community. The participant was not interested in reducing energy consumption, but energy efficiency in light of the community's social, cultural and economic interests. For example, mold is a problem in the community resulting in significant money being spent on renovating houses. Heat pumps could potentially address this issue, but they will increase energy consumption.

There was concern with conserving power when their communities use energy consuming pumps or outdated pumps that are running continuously all day and night. The community of one participant is looking at a sewage lagoon with a pumping requirement that will be environmentally beneficial, but will also increase the community's demand for electricity. This is important to their health and social well being. The participant stated the community should have that sewage system and a clean electricity system.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

There was concern from one participant that BC Hydro has a plan for the north that will open a gateway to electrification programs in the future. Sending electricity from north to south is not something the participant's community is interested in having in their territory. The participant also noted, however, they want service to their community.

A concern was raised about the amount of power consumption that shore power for ships would require. With this demand on the hydro system, BC Hydro would be able to service many residential homes.

One of the participants noted that they live in a community that emits greenhouse gases as a result of diesel generation. This participant noted the potential for diesel spills and that there have been many spills already. The participant stated that these have social and health implications. The participant stated that there is no economical way for their community to deal with these impacts and that these need to be accounted for. Until BC Hydro comes up with a way of capturing those costs (cultural, social, economical) in how we generate electricity and how we use it then we are not going to understand the real implications for First Nation communities.

There was concern about the affordability of electric cars. It was noted that a person on social assistance will not be able to afford to plug it in. If it was plugged in it would use all of the energy from the community generator.

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There was an interest expressed in having more storage and customer contributions to the grid and it was noted that there needs to be significant benefits for doing so (see attributed comments of David Benton below titled “Attributed Comments”).

A participant indicated that, at a high level, electrification sounds great because greenhouse gas reduction is a priority, but if it involves increasing the rates then they do not agree with it. For the participant, increased rates are an unacceptable trade-off.

Electricity Generation Options

BC Hydro would like to understand First Nations’ perspective on the three example portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation.

Rates were a significant issue to the participants:

- One participant expressed frustration that BC Hydro rates are going up.
- It was indicated that for anyone to make plans there needs to be consideration of the cost. Another big factor is the consideration of connectivity to the hydro line.
- The number one issue in the 20 year plan is rates. Electricity bills are already expensive. It was noted that they are interested in looking at wind and water and what is affordable. If it becomes unaffordable they may have to switch to diesel. The participant wants to see economic benefits for their community too, and not just for industry. The participant stated that as these are First Nations’ resources, First Nations should only have to pay ¼ of their hydro bill. It was suggested that maybe there should be a First Nations hydro.
- There was concern expressed with the cost of moving energy around domestically as the areas that are producing the energy are being burdened with the costs of transporting it. It was pointed out again that the north has a significant portion of the province’s potential, but there was a concern about the costs associated with shipping the power to the Lower Mainland and that the people in the Lower Mainland are paying the same as people in the north. A participant stated that the existing pricing structure does not favour the north where a big portion of renewable energy comes from. It was noted that communities need more money for smaller projects.
- There was concern with the high costs that are associated with global infrastructure, a change from when BC Hydro provided power generating stations to communities. The concern is that they will have to turn off their hydro because they cannot afford the costs. The participant suggested there was a solution if BC Hydro worked with communities to have independent power.
- A participant noted that they would like to see dividends or reductions on their power bill.

There were several participants who commented on Site C:

- It was stated that Site C should not be considered as it is a large area of land. As well, it was indicated that the area is concentrated with elk and moose.
- There was concern with the scale of the Site C option and the size of the reservoir. There was an interest in having BC Hydro consider an alternative such as a smaller scale option for Site C, and increase the number of independent power producers. The

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portfolios do not contain this solution. There was a feeling that BC Hydro wants it one way but First Nations disagree as they will be affected by these options.

- One participant noted that BC Hydro should consider adding more units to the existing dams before considering Site C as an option.
- A participant stated that they would like to see proper accommodation of all British Columbians and considers the Site C project to be negative. They noted that the Williston dam negatively affects the traditional territory of the participant's First Nation. There is a social impact. The participant would like to find a win-win solution where their members are not affected and they can have a relationship with BC Hydro.
- There was frustration over talks of creating another dam and concern that there will be nothing left of the land to leave for their grandchildren. The participant noted that BC Hydro and the government need to consider the land, health and safety of their families, animals, plants and water. Their community considers land and resources more important than power and will go back to their traditional way of life before jeopardizing the land.
- There was an issue of trust that was raised between their community and BC Hydro and how this has affected their relationship with BC Hydro. There was recognition that BC Hydro is correcting some past wrongs and making reparations in many areas. However they are concerned that the same impacts may occur again. Being relocated is not something communities want to do. The participant noted that they would like to see public input into projects like Site C and have BC Hydro understand where they are coming from.

Regarding portfolio two, it was stated that the economic and environmental impacts may be geographically concentrated but could be far more detrimental.

There was a comment raised about regional location of resources and that the north has a significant portion of the province's potential for the resource options that have been identified. There was an interest to have tidal and wave energy considered as it was noted by a participant that B.C.'s coast has significant potential and should be identified as a resource option. The participant noted that their community is not interested in burning fossil fuels. The participant took issue with the focus on proven technologies as these old technologies will not address B.C.'s future.

There was a concern expressed that if BC Hydro comes into their territory their animals, fish and traditional berry picking may be impacted. There was a concern for their burial sites. There was frustration with the existing transmission lines. A participant stated that BC Hydro makes money from them and the community has nothing for the future.

There was an issue of connectivity to the grid raised by a participant. Construction of any potential renewable resources in their area will require major contributing factors such as building new roads.

A participant noted that before a portfolio involving run-of-river is chosen there needs to be consideration of who the clientele are and when storage is at its peak.

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Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

Several interests and concerns were expressed relating to this region's transmission lines:

- A participant expressed frustration with a line that is currently going through First Nation territories and the lack of accommodation for the line. The participant noted that a second line will double in size the transmission corridor. This would create huge access to their area where they hunt and fish, and to areas where they have medicinal plants and berry picking. There needs to be different types of accommodation for those that do not have treaties, as they do not have a voice. The participant noted that BC Hydro needs to provide accommodation and respect to First Nations for use of their land.
- Questions were raised about the transmission lines that may be built to accommodate the new wind projects. It was noted that there is a need to do this and this is a huge issue for these projects. Another consideration is economies of scale to facilitate connection to the grid. The participant noted that they want to combine wind and run-of-river to do this.
- Another participant does not see a need for an open corridor in the territory to sell electricity.
- There was also concern about the health impacts of the transmission lines.

One participant indicated they favour the proactive approach over the reactive approach to transmission planning.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

It was indicated that before BC Hydro considers the issue of export, BC Hydro make electricity more affordable for the ratepayer. Also, the participant identified a need to understand first, if there would be a footprint.

One participant was concerned with the relationship between transmission planning and the potential for an export market as the participant believed that they are related and cannot be separated. It was pointed out that if BC Hydro develops a transmission system that will allow connection to the many independent power producers, this will create the ability to add electricity to the system. The participant was of the view that although the ratepayers are not supposed to bear the costs associated with exporting electricity they will be paying for the transmission costs. As a result, the participant noted that they would like to see consideration for reducing the cost of transmission because of the potential for export. Also, the participant was of the view that ratepayers should share in the revenue of export, but be shielded from the risk of export.

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It was noted that any independent power development in the future should have First Nations' involvement and that there ought to be revenue sharing on development so there is an economic advantage.

It was noted that the *Clean Energy Act* should be changed to include revenue sharing with revenue going back to communities.

It was stated that people are benefiting off of First Nations' local resources and that there needs to be capacity to assist First Nations. It was stated this would be sustainable and there would be certainty with that approach.

Clean or Renewable Energy Development in First Nations' Communities

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities.

There was an interest in seeing economic benefits for First Nations in clean energy projects. It was indicated that if there will be power initiatives in their territory they want to move it forward themselves and to have revenue sharing from it. This could be a source of revenue for their community.

It was noted that there is a lack of jobs. A participant noted that they would like BC Hydro to continue to develop its internal resources for economic development that is focused on First Nations.

There were several suggestions regarding how BC Hydro can assist First Nations in clean energy development:

- There was a request to see capacity building with BC Hydro in terms of moving the projects along quicker and technical workers or a committee to fast track the process. Their community is currently on a diesel generator so they have an interest in seeing other options like micro hydro.
- There was an interest in having BC Hydro work with communities closer to pursue renewable projects. The concern was not being able to get information from BC Hydro to help move their project forward. The concern was that they might hit roadblocks, or find out about issues with their project after already having invested a lot of money.
- A participant expressed that they are frustrated with the lack of access to the grid. There are many opportunities with independent power producers. The participant noted that First Nations put a lot of time and resources into these, but they are wasting so much time because BC Hydro has not made a decision on who gets access to the grid.
- One participant thought that they would be able to go right to BC Hydro to get their master plan and environmental plans. Instead the participant said they find that after they do all the work there is all this red tape in the way. There are many resources and opportunities for First Nations and the participant would like to see this materialize.

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- It was indicated by a participant that their community has interest in run-of-river and wind in their area but there needs to be better communication with BC Hydro regarding what is possible.
- There was an interest in having support from BC Hydro and to have agreements reflect that they are in this together, working with First Nations and advising them as to whether a project is not going to work. It was stated that there are many opportunities within BC Hydro to help First Nations with independent power producers and community-based projects and that BC Hydro should commit real resources to support this. Capacity is an issue that cannot be underestimated. One participant noted that in meetings with BC Hydro there is only one representative from the community and many people from BC Hydro.

A participant wanted to see benefits from the Northwest Transmission Line. The participant further noted that their community would like to have one megawatt for their village to operate. They want to sit down and look at a benefit package with BC Hydro.

It was stated that if the B.C. government is recognizing indigenous people then there should be an opportunity for First Nations to collect carbon credits from projects that are located within their traditional territory. This could be a way for communities to get economic value from their resources rather than that value going back to the Province.

Attributed Comments

The following comments have been attributed at the request of the participant.

Today's session has been described as consultation but it is not consultation to Kitsumkalum Band. Proper consultation needs to come home to our office and to our managing team, treaty and band on putting our imprint into any management plan. – *Gary Alexcee and Don Roberts, Kitsumkalum Band*

I consider this as an information session to be introduced to the Integrated Resource Plan. Our definition of consultation is different from BC Hydro's. I consider this information sharing. – *Chief Carol Ann Johnny, Dease River First Nation*

I want to talk about storage and customer contributions to the electricity grid. For example, a wind mill or water wheel on my property. I believe that if BC Hydro goes to government for recommendations on policy, I think that if we have any faith in the ingenuity of B.C. and the fact that we have so many natural resources, that if there are the proper incentives to contribute back to the grid on our own there needs to be significant benefits for doing so. – *Dave Benton, Gitga'at Nation (Hartley Bay)*

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC were given an opportunity to share with the group who they are, what their mandate is, background on the council itself as well as their presence in the Integrated Resource Plan process. Their mandate is to develop energy policy and to speak on First Nations issues and

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opportunities. Specific to the Integrated Resource Plan process, the BCFNEMC will attend all nine sessions for the Integrated Resource Plan. Their objectives are:

- To speak to issues or formulate positions on issues and perspectives that are relevant to all First Nations;
- Support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for follow-up purposes:

1. Notes and comments from the stakeholder meetings?
2. Definitions of being on/off grid, integrated/non integrated areas

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

BC Hydro Integrated Resource Plan: First Nations Consultation

Fort St. John – March 16, 2011

Quality Grand Inn

First Nation/Organization Attendees

Blueberry River First Nations	BC First Nations Energy and Mining Council
Treaty 8 Tribal Association	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Nadja Holowaty	Energy Planner
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan and How Is It Developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro's plan to meet the province's future electricity needs. Nadja Holowaty then provided an explanation of how BC Hydro's Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro's presentation for their reference.

Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?

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- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note-taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below

Participant Input

Consultation Process

There was significant discussion by the participants regarding the Integrated Resource Plan consultation process. Concerns expressed included:

- The information being provided is nowhere near the information needed to make informed decisions and meets only the lowest level of consultation on the continuum.
- BC Hydro should be at the community making these presentations to the community and explaining what this is all about.
- First Nation rights and title need to be included in the evaluation and planning process. The technical side of planning does not include recognition of title on lands.
- A discussion of alternatives did not occur before BC Hydro contemplated submitting a series of applications to build the Site C project. The participant questions whether this can be reconciled with the Integrated Resource Plan process to consider alternatives.
- There were consultation recommendations brought forward to BC Hydro and it seems that none of them have been followed.

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- The time period for consultation is not enough.
- More capacity funding is needed to understand and respond to the Technical Advisory Committee materials on the Integrated Resource Plan.
- Discussion of portfolios, particularly on Site C, requires deep consultation
- A process requires iterative meetings.
- There is a need to go back to the communities and share with the leadership

The representatives from Treaty 8 noted that they are advisors to Treaty 8 and were not there on behalf of any First Nation. They also noted that they have no formal position within Treaty 8 that would authorize them to consult on behalf of the organization or any of the First Nations. The participant stated that their role is to come, to listen, to provide BC Hydro with some information that is within their ability and then go back to the organization with what they have heard. It is their expectation that out of this process some kind of meaningful consultation can then be negotiated and agreed to and undertaken.

A participant characterized the process as engagement and not consultation. The participant states that the reason for attending was to begin an engagement process that would allow discussion of the kind of information required to support meaningful consultation. The participant stated that the provision of information is the lowest level in a consultation continuum, but the information being provided is nowhere near the information needed to make informed decisions.

The participant would also like the consultation process to have the time and resourcing to allow for meaningful presentations on the resource options because that is not happening.

A participant stated that BC Hydro is preparing to submit a proposal to begin the environmental assessment process for the Site C and they are contemplating action in April. The participant stated it was disingenuous to say that the government is not committed to anything or that this process is clear and transparent in relation to government decision making. The participant was of the view that the government and BC Hydro have already made some decisions. It was stated that a discussion of alternatives had not occurred before BC Hydro contemplated submitting a series of applications to build the Site C project. The participant questions whether this can be reconciled with the Integrated Resource Plan process to consider alternatives.

A participant understood it takes a long time to plan a project as massive as Site C. The problem with that is over the last 2.5 years First Nations have already had to suffer the impacts of BC Hydro's planning and studies within the Peace River watershed. It was stated that there are alternatives to Site C that have a smaller footprint and there has not been a meaningful consultation process with First Nations about those alternatives in relation to things that BC Hydro has identified as part of the Integrated Resource Plan. There is a concern that the Integrated Resource Plan process is seriously out of step with the Site C planning, application and approval process and that has resulted in significant infringements of rights to Treaty 8 people.

It was also noted that there was only three participants and therefore the participants in the session may be generalizing.

One participant stated that before input is put into the summary that it should start at the community level. The participant strongly believed BC Hydro should be at the community presenting this information and explaining to them what this is all about. The participant indicated that the consultation work is really overwhelming. The participant noted that there are 500 members in the community and the participant is just one person.

It was stated that the technical side of planning does not include recognition of title on lands. This is an issue of accommodation. There needs to first be recognition and then inclusion of First Nation rights and title in the evaluation and planning process.

It was stated that Site C is the only large project being considered. It was stated that some First Nations need to be engaged at a different level and it was noted that is not happening here. There were consultation recommendations brought forward to BC Hydro and it seemed to the participant that none of them really happened.

An application for an environmental assessment for Site C will start a lot of work. A participant said that when the Integrated Resource Plan is submitted to government, that plan will be a part of the information package that is taken into the Environmental Assessment process to demonstrate due diligence in relation to consideration of alternatives. At that time, the participant's community will have to stand up and say there has not been consultation.

A participant said that because BC Hydro is a Crown corporation it is almost impossible to separate what the government does and what BC Hydro does. It was indicated that the perceptions of the presentation about the Integrated Resource Plan is coloured by what the Government of B.C. has done under the *Clean Energy Act* to dismantle the British Columbia Utilities Commission oversight process that historically has been in place for review of projects like Site C to determine whether a project was in the public interest. The participant believes the drastic changes in the *Clean Energy Act*, have the potential to infringe on First Nation interests because they no longer have access to that process. Further, the participant states that the *Clean Energy Act* was not the subject of consultation with the participant's First Nation. The perception is that the process is unfair, not in good faith and stacked against us.

A participant asked whether BC Hydro is open to changing the process for the development of the Integrated Resource Plan. The BC Hydro representative said BC Hydro would need to review a specific request set out in writing and would respond to that request.

Integrated Resource Plan Process

A participant stated that it is not clear what the implications of the decisions in the Integrated Resource Plan are. The message from BCH is that choosing a plan does not preclude project specific consultations later; however, there is a concern about the implications of the Integrated Resource Plan on future projects. The concern is that the Integrated Resource Plan will be used

as a reason to build the Site C project. This creates problems and delegitimizes the First Nations consultation process.

The Integrated Resource Plan is designed to determine a strategic direction going forward but there are other producers in the province that are not a part of this (i.e. Fortis and Columbia Power).

A participant believes that the Integrated Resource Plan will affect a larger environment than the Province of B.C. Further development on the Peace River is going to have to be undertaken with some degree of attention to the downstream impacts. The participant does not see an explanation of how BC Hydro has considered that in the Integrated Resource Plan. The footprint in terms of Site C is quite small in contrast to the cumulative impacts of hydroelectric development. The participant points out that there is no reference to incorporating into the planning process any ongoing discussions between governments regarding inflow regimes that will affect First Nations' rights and interests.

It was noted that the generation and load figures for Fortis and Columbia power are not shown here today. The participant thought this should be considered as they are major players in the province.

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

BC Hydro was commended by a participant for putting Demand Side Management on the top of the list as people have wanted this for a long time. The participant indicated they have been trying to get utilities to do this because demand side management is an affordable and predictable resource.

When asked for input on specific questions in the First Nations Input Form related to conservation and efficiency, it was stated by a participant that this is moving too far into what can be considered consultation and this is not what they came here to do today. It was indicated that they would be better to talk about other aspects of the presentation and not go through the First Nations Input Form. This information can be taken back to Treaty 8 and they can discuss it. It was stated that, only when we have an informed understanding of these matters will we be able to provide meaningful answers.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

Participants discussed electrification and indicated it was a logical step to electrify ships in port. It was stated that BC Hydro should not assume fuel switching is one way i.e. from gas to electricity because other fuel sources could be chosen.

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A participant stated that BC Hydro already has a mandate for electrification and because BC Hydro is ultimately the vendor of electricity that this distorts some of the decision making. Why not have Horn River burn their own gas to run their pumps.

The participant indicated that they are having a dialogue regarding the Horn River Basin and the Province and industry are engaged in a process to map deep aquifers. The participant stated that it makes no sense to dam a river to send electricity to Horn River if the gas producers have access to deep wells with water at a sufficiently hot temperature that it can be used to power electrification processes with heat pumps. The participant believed this infrastructure would be much less invasive than a hydroelectric dam on the Peace River. Horn River Basin might be able to be energy self sufficient within that type of electrification process.

It was further noted that the issue of greenhouse gas (GHG) reductions is contorted because the Province is exporting gas.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation

A participant stated that there needs to be consultation on more than the three example portfolios options presented during the session.

A participant indicated three ways to meet the gap: efficiencies at existing plants, Site C and then other power calls, but notes there are other things that are not chosen. The Integrated Resource Plan de-commits BC Hydro from pursuing other options. The participant stated that certain things have been pulled off the table and wants to have a serious discussion about what the alternatives are in terms of generation.

There was a discussion of different resource options:

- A participant stated that it appears that no one has looked at a cost benefit analysis between geothermal and hydro electric development. The participant also indicated that they understand the entire area around BC Hydro's current hydroelectric system as having high potential for geothermal. They are trying to determine whether the Province and BC Hydro have so constrained their consideration of options so as to exclude what would otherwise be a reasonable alternative to hydro electric development with a cost benefit analysis. They feel that hydroelectric development has high environmental impacts and are treated as externalities in these dialogues.
- A participant indicated that in their area they have lots of forestry landscape and an abundance of potentially cheap, natural gas.
- A participant was interested in the B.C. Government incenting solar developers.

There was input on Site C:

- Their community has publicly said that Site C is not sustainable, it is not clean, it is not renewable and it should not happen.

- A participant stated that the weakness of BC Hydro's planning model is that these three portfolios have been analyzed without regard to externalities. They indicated that if you build in the externalities associated with costs and downstream effects of Site C and the current water regime continued, the cost of options that include Site C would increase significantly whereas the renewables mix without Site C would be unaffected as they do not cause externalities. Because BC Hydro does not look at this larger environmental impact they feel the planning model creates a false impression that this mix of run of river hydro and wind and Site C is costing less. It costs BC Hydro less but costs someone else more.
- A participant indicated that a disadvantage to Site C is that it is 900Mw, which is a high step capital investment. This will require BC Hydro to make an investment to meet demand increase over X years whereas smaller facilities would be smaller steps as opposed to Site C's larger step.
- A participant stated that if you use the example of Site C, you gain a value by not doing Site C. The analysis goes beyond economics and includes environmental attributes. The participant stated that these issues will not be considered at a technical level.
- A participant stated that there is water stored in the reservoir but the problem is that from a downstream perspective the downstream members have never accepted the storage regime. The process seems to take existing flow regimes as a given. If an agreement is negotiated changing the flow regime and the ability to generate electricity at the existing hydroelectric facilities Site C may not be consistent with this changed flow regime.

A participant indicated that there tends to be a conflict between a generator of electricity (in this case BC Hydro) doing planning for the Province because more generation means BC Hydro makes more money selling energy. Having BC Hydro plan electricity is like going to the barber and asking if you need a haircut. The planning needs to be separated from the generation process such as with Ontario Power where their planning process is done independently from the company that does the selling of the power.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

There was a concern that BC Hydro was proceeding with a feasibility study on a Northeast Transmission Line before exploring other options for generating electricity.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

A participant stated that the independent power producers would incur the risk but the independent power producers would also incur the benefit and the participant stated this needs to be explained to people.

Clean or Renewable Energy Development

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nations' communities.

A participant stated that their leadership has said, very loudly, that they do not consider hydroelectric energy to be clean or renewable. Their perspective on development of First Nations in rural communities is that their culture and way of life are dependent upon a boreal ecosystem that they use. Hydroelectric development has and continues to infringe on their ability to use the boreal system. They have lost through construction of existing facilities a very valued ecosystem component and that they now stand to lose the remaining 1/3 that is within a reasonable distance from their communities. Once you flood it, it is gone. They have watched some of the processes that have gone on over the last few years of trying to reclaim First Nations territories after they were flooded out and the external costs of that, in terms of ecological and human cost, are too high.

Their perspective on clean energy sources is that wind power largely is both clean and renewable. It does have a footprint but it can be managed. If First Nations see all the wind development money leaving their territory they will have a problem with that. One participant indicated that they are participating in wind but do not have ownership.

They would like to see attention on thermal because it seems that the footprint associated with thermal could be managed better than the footprint with hydroelectric. Through the water use plan we initiated a dialogue on things that could be done regarding the Bennett Dam. One thing their community wanted to talk to BC Hydro about was a process that would allow them to work with BC Hydro on one side and forestry companies on the others side with what was once called cogen to use the waste heat for greenhouse and fish farm operations but they could not get traction in that process. They have ideas and perspectives on resources and would like to talk to BC Hydro and the government about them but feel that the way the consultation process is structured around planning does not afford them real opportunity for that type of discussion.

A participant asked what BC Hydro is contemplating in terms of finding long term revenues for communities and used Ontario's feed in tariff as an example. The participant stated that BC Hydro might be willing to incent more with biomass as opposed to wind. As has been done in Ontario, the participant stated that BC Hydro should sit down with key people and come up with a way to do a feasibility study around this, make it a focussed process and design how you are going to incent First Nations to get into the power production business. It will take time to figure out what the incentive process will look like, but taking the time will get results.

It was noted that sometimes BC Hydro acts like a corporation building dams and generating power, but sometimes acts like government incenting First Nations and wanting to know what First Nations think about getting into clean or renewable energy development. This was a source of confusion to a participant. First Nations are angry with BC Hydro for building 2 dams and not speaking to them about it and 40 years later are still not talking about it. The participant stated that people the participant knows do not like BC Hydro and do not want to talk BC Hydro. BC Hydro cannot expect to receive a positive response because they see BC

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Hydro as the corporation trying to get a yes so they can build their next dam. This is adverse to their interests and anything else they say or do is coloured with that perception.

Another participant would like to see First Nations in ownership of these projects so they can make some revenue. Unlike project developers that will come in and out, The First Nations are here indefinitely.

Additional Comments

Demand for Electricity

It was questioned whether BC Hydro is a net importer of electrical power, since it is unclear how buying and selling of electricity based on market prices affects this. Nobody has explained how BC Hydro's proactive buying and selling of electricity has affected our assessment of the need for electricity.

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation.
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

No specific requests were made by participants at the workshop

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;

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- Provide written comments;
- Visit the BC Hydro website: <http://www.bchydro.com/irp>

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

BC Hydro Integrated Resource Plan: First Nations Consultation

Prince George – March 17, 2010

Coast Inn of the North

First Nation / Organization Attendees

Carrier Chilcotin Tribal Council	Nak'azdli Band
BC First Nations Energy and Mining Council	Nazko First Nation
Gitsegukla Band	Lhatko Dene Nation (Red Bluff)
Gitxsan Treaty Society (Hereditary Chiefs)	Saik'uz First Nation
Kwadacha Nation	Tahltan Indian Band
Kwakiutl Indian Band	Takla Lake First Nation
Lake Babine Nation	Tsay Keh Dene
Lheidli T'enneh First Nation	Wet'suwet'en First Nation
Tsek'hene First Nation (McLeod Lake)	Xeni Gwet'in First Nations Government
Nadleh Whut'en First Nation	

BC Hydro Representatives

Charlie Weiler	Project Manager, First Nation Consultation
Cam Matheson	Executive Director, Energy Planning and Power Acquisitions
Danielle Van Huizen	Note Taker

Neutral Facilitator

Dan George	Four Directions Management Services
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Welcome and Introductory Remarks

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan then explained the format for the session as follows:

- Description of the Integrated Resource Plan;
- Overview of how an Integrated Resource Plan is developed;
- Presentation on the 6 topic areas related to the Integrated Resource Plan and a facilitated discussion on each.

What is an Integrated Resource Plan and how is it developed?

Charlie Weiler explained that the Integrated Resource Plan is BC Hydro's plan to meet the province's future electricity needs. Cam Matheson then provided an explanation of how BC Hydro's Integrated Resource Plan is developed and the key things that energy planners need to consider when determining how BC Hydro will meet future demands for electricity. Participants were provided with a copy of BC Hydro's presentation for their reference.

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Integrated Resource Plan Topics

Throughout the day separate presentations were made, by BC Hydro, which provided participants with details on each of the following topics:

- Conservation and Efficiency: Should BC Hydro pursue greater conservation and efficiency?
- Electrification: Should BC Hydro be proactive in promoting electrification?
- Electricity Generation Options: When looking forward 20 years, what is the blend of currently available resources BC Hydro should consider when developing a portfolio to provide electricity on a province-wide scale?
- Transmission Planning: Should BC Hydro take a proactive approach in planning for transmission?
- Export Market Potential: Should BC Hydro acquire renewable energy from independent power producers for the sole purpose of exporting electricity to other jurisdictions?
- Clean or renewable energy development in First Nations' communities: One of British Columbia's energy objectives set out in the *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. What are First Nations' interests in clean or renewable energy development for their community?

In addition to the presentations, information on the above topics was provided in the *Integrated Resource Plan: First Nation Input Form*. Additional reference information was also provided in the *Planning for a Clean Energy Future* workbook.

The presentations were followed by facilitated discussions lead by Dan George. During the facilitated discussions First Nations' input on these topics was sought so it could be considered by BC Hydro in the development of the Integrated Resource Plan.

Charlie Weiler explained to the participants that the BC Hydro note taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. A summary of the comments captured during the facilitated discussion and grouped under topic headings is provided below.

Participant Input

Consultation Process

Many participants strongly disagreed with the session being called consultation.

- It was stated that this is not consultation because there is no accommodation.
- It was noted that consultation needs to be much deeper.
- It was noted several times that consultation is chief to chief, head to head.
- A participant indicated that there should be compensation for the damage that has already been done in their territory and then accommodation.
- A participant stated that they will speak to BC Hydro once BC Hydro acknowledges their Nation's title and rights on their traditional territory.
- BC Hydro received comments that it needs to come to the community and talk to community members.

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- BC Hydro needs to give their community all the information so they can give informed consent. The information presented is very general. A participant noted that BC Hydro needs to include First Nations ahead of time.
- With respect to Site C, it was stated that BC Hydro cannot do anything without prior consent of those in the north.
- It was noted that First Nations need to have a say at all levels.
- It was noted that First Nations need to be seen as partners in decision-making, not just in planning, but right on the ground.

More detailed comments relating to many of the above points are set out below. Several participants asked to have their comments regarding their objections to the term consultation being used in connection with the workshop attributed. These are set out under the section below titled “Attributed Comments”.

A participant stated that BC Hydro says this is early in the process, but because BC Hydro has been around a long time, it is way behind.

A participant stated that it was good that BC Hydro has come to First Nations regarding the Integrated Resource Plan, but in the long run First Nations must be compensated for the damage already done. First Nations should be compensated for when BC Hydro first came through their traditional territories, not just reserves.

It was stated consultation needs to be much deeper and that it should be more than just ticking off the necessary boxes. They would like BC Hydro to be up front with First Nations all the time and include them ahead of time and that First Nations should be accommodated. They speak for the land, the water and the environment. They have their scientists in their communities and their information should be taken seriously.

There was an interest to have BC Hydro give their community all the information so they can give informed consent. BC Hydro needs to understand there is a long standing history between First Nations and BC Hydro. There was frustration over the possibility of electrifying an area for a mine because they need the electricity but their community has been left out of the discussions. The participant stated that they will speak to BC Hydro once BC Hydro acknowledges their title and rights on their traditional territory.

A participant described a negative experience with BC Hydro where BC Hydro asked a secretary from the First Nation if BC Hydro could come on to the reserve to do work. The participant believed that this was rude and untrustworthy.

In order to comment on the plan, a participant noted that one needs to know where one comes from, ones past, current status and future. It was noted that there is a lack of an engagement process or lack of discussions with individual communities. There are so many needs locally and there needs to be relationship building with the communities. They would like the engagement to be at a Chief to Chief level so the needs of the communities can be understood.

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It was noted that it is important to have true dialogue and senior BC Hydro representatives speak to their people. They have identified what they see as a gap between First Nations and BC Hydro, as they want their respective leaders to work with BC Hydro's leaders.

A participant noted that if the past is not dealt with, how can you plan for the future? The participant further noted that the planning is not on a Chief to Chief basis.

There was an interest in having BC Hydro hear and move on issues that they have, such as those First Nations that are not hooked up to hydro and how that may affect the relationship. They want to be heard on their issues and they want to be a part of the decision-making process and not halfway down the line.

Participants noted that in order to plan for the future you need to work with First Nations and First Nations need to have a say at all levels: the approval process, the decision-making process, the pre-planning process and at the pre-pre-pre planning process. They want to be engaged at the idea stage.

One participant noted that they see relationships with First Nations as partners as a positive way forward in planning for the future. The participant viewed the purpose of the Integrated Resource Plan as partly to acquire resources for the future and pointed out an opportunity to acknowledge First Nations title. The participant noted that First Nations need to be seen as partners in decision-making, not just in planning, but right on the ground. The participant noted that this is security for the future and that BC Hydro can be leader. People skirt around the issue of title but to be bold and acknowledge it is a way for the future.

Some participants did not believe that BC Hydro had not developed a plan.

A participant stated that if BC Hydro has a plan and First Nations are not involved then it will boil down to the courts and they will say no. It was raised that when BC Hydro plans they need to involve First Nations at the table otherwise they will have wasted their time.

A participant shared with the group that their Nation's perspective on planning which includes consideration of how their activities will impact their neighbours. Their nation has a motto "we will die on the hill for the water." Their approach is to be sustainable. Industries have come to them because they know the Nation has control of their resources. The participant shared that they have gone through this process in their territory and feel the pain expressed today. The participant stated that First Nations are wards of the state.

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency

It was noted conservation needs to be considered in the large urban cities because these areas benefit from the electricity but the rural areas bear the cost. Rates should be higher in large cities because they consume more.

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The following concerns and interests were expressed regarding upgrades that will achieve conservation and efficiency in First Nations' homes:

- If there are rule changes with respect to housing and technology, First Nations will need the resources to physically make those required changes. First Nations will also need capacity dollars.
- The technology required to adapt to conservation may constrain their territory.
- It was suggested that BC Hydro talk with the Chiefs and Indian and Northern Affairs Canada to decide what to do.
- A lot of houses on First Nation reserves are not up to code because their members do not have the money. Upgrades will cause hardship to their members. There is an interest in understanding ways to upgrade their housing in such areas as new windows or insulation. This needs to take place first.
- Support for conservation but the issue for a community is the challenge in pursuing conservation. They want to build better houses and to install solar paneling or wood pellets for their wood furnaces, but their community cannot afford these.
- A participant questioned the energy savings from a Power Smart package. The houses built in the early 1990's have never been upgraded. There are cold drafts. The participant noted that they get fancy light bulbs, but they are using electric heat and are still losing heat.

It was indicated that although they have the hot water blanket and have changed to energy efficient lights they have not seen a reduction in their hydro bill. They are lucky to have double pane windows.

Concern was expressed about BC Hydro's rates for members living on welfare; increasing rates for these individuals will not work. Some participants referred to a visit from the 'Prince Darkness' which was understood by BC Hydro to mean BC Hydro power would be cut-off from homes or the tenant's would be evicted. One participant would like to see free power for First Nations because it is generated in their territory.

A participant expressed a concern regarding the costs that their band office incurs as a result of the power outages, such as purchasing new water tanks and fridges. They would like to work with BC Hydro to see if there is an option to recoup some of that money.

It was suggested that BC Hydro could help by providing cash incentives to help electricity savings similar to what ICBC offers.

Electrification

BC Hydro would like to understand First Nations' perspective on whether BC Hydro should take a proactive approach to encouraging electrification.

A participant expressed frustration about the gross difference of realities between BC Hydro and First Nations. For their community it is important to ensure there is power and energy available for their members so they can use their toasters. It is not about electrifying grids for electric cars. It was noted there is a disconnect between electrifying grids to do mining and communities that are off the grid and who are living in poverty.

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A concern was raised with the huge burden the forestry industry has on the grid. They would like to see the Province, forestry, gas industry and BC Hydro find a way to lower the rates. It has to be realized that these resources are in First Nations' backyards and there must be recognition of their title and rights.

One participant indicated agreement with electrification in light of a recent experience involving a failed sawmill. Their community partnered with a sawmill company and the major cost for them would have been the electricity, but that was not made available as it was a diesel powered area. The mill shut down because of high energy bills and the participant said BC Hydro refused to provide electrical power.

A participant stated that forty homes were supposed to receive free electricity but they have not received it. The participant referred to an agreement that their First Nation would not sign, but the participant said the Minister signed the agreement on their behalf. The expectation for present and future agreements is to have aboriginal people involved in partnership agreements and to have their rights and title respected.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation.

Regarding example Portfolio One – Renewable Mix without Site C, a participant questioned why biomass was not included.

There was a concern with run-of-river classified as a clean resource when it alters the flow of the river and if you alter the fish in the creek it should not be considered clean as a large number of people's lives will be affected as the rivers and creeks sustain their lives.

From the perspective of one participant, they support a lower ecological footprint and an opportunity for First Nations to be energy producers and for jobs.

There was a suggestion to consider options in other jurisdictions such as South East Alaska.

A participant stated that it was not fair to only be presented with the example portfolios if there are hundreds of portfolios. The participant did not want to make a decision without having an opportunity to see the hundreds of portfolios. The participant also stated that BC Hydro cannot do anything without the prior consent of those in the north.

Several participants stated their opposition to Site C.

- It was indicated by a participant that their elders have spoken loudly against Site C as they have seen the impacts of other dams in the province. They believe that there is a plan in place and that the government, through the *Clean Energy Act*, has paved the way for Site C to occur. It is their understanding that the real need for Site C is to extract more electrification for Enbridge and the Hwy 37 project. The participant stated words to the effect of: Let's flood the Fraser River and see how they feel about it. Site C will take up many acres of land and that will take away our land and resources and the tributaries on the water. The participant noted that this is

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way overboard and this is their concern. The participant stated that the power from Site C is needed to extract more resources from their First Nation's territory.

- A participant stated their disagreement with Site C. The participant did agree with the other resources because First Nations have an opportunity to get involved (see the comments of Chief Geronimo Squinas below under the section titled "Attributed Comments").
- A participant disagreed with having dams because their community values water and is worried that the Californians will take it.
- Another participant stated opposition to Site C which will result in significant flooding. This will infringe on First Nations' rights to harvest animals and hunt and trap. It is a heated topic. The concern is that Site C will become a mechanism for exponential growth and extraction of resources in their territory. The participant noted that Site C will promote shale gas. This will take billions of litres of water which is their precious resource. The participant noted that it is very important for First Nations to stick together and to show how they have been impacted, not only by Site C but by cumulative impacts, such as forestry and mining. The participant was here to represent the community and stated that Site C is not negotiable. The participant questioned that if First Nations are not heard on this issue then what issue will they be heard on.
- A participant referred to the example portfolios and stated they believe this is about the money and that there are serious concerns from First Nations about Site C.
- It was stated that each industry will not look at the cumulative impacts of their activities. There was an interest in having each industry look at the cumulative impacts and to talk to each other and First Nations about their impacts. Site C is in First Nations' backyard and it will hurt First Nations people.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

A participant stated directly that they did not want to see lines in their territory without their informed consent and expect corporate policy to reflect that.

A participant asked whether BC Hydro will accommodate the future mines with transmission lines as there is concern that the landscape will be impacted by this. The example provided was the impact on the landscape by gas lines. The participant stated that this issue needs to be brought forward with First Nations input into it.

A participant indicated that from a BC Hydro customer's perspective, a responsive approach makes more sense because the proactive approach will cost the ratepayer more.

On the issue of transmission planning, a participant noted that they would like someone from BC Hydro to settle a trespass issue with their community. Also in future transmission planning, it was noted that compensation needs to be considered for both future and past trespassing for the lines.

A participant expressed frustration with the government signing off on projects on lands when First Nations have title. It was stated that First Nations still own the land, but there are many activities going on their lands now.

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Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

A participant asked whether it would be profitable to export power given the facilities required to generate the power as well as the resulting footprint. The participant shared that their Nation asks this question before they look at any project and would like BC Hydro to consider if exporting electricity is profitable for BC Hydro and for First Nations.

There was concern about exporting electricity to California because BC Hydro has not collected a huge amount of money from previous electricity sales to this state. It was noted that this was a big loss that affects BC Hydro's bottom line. It was stated that the burden is on First Nations and non-First Nations to make up the shortfall from the previous unpaid electricity sales to California. It was noted that the concern is that people will have to pay the cost of these projects twice; first in rate increases and then in environmental impacts.

One participant referred to the bullet point in slide 40 of the presentation which stated "BC Hydro is likely to use both approaches going forward" and stated that BC Hydro will do what they want regardless; the participant noted that people are getting fed up and will start protesting on logging roads and other places in order to be heard.

Clean or Renewable Energy Development

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nation's communities.

Participants objected to the definition of clean energy as follows:

- A participant stated that Site C is not clean energy. The impacts from the Site C dam will last forever.
- A participant noted that altering a flow of a river and diverting cannot be defined as clean. Running a service road at the side of a hill to get access to flow waters is not clean.

A participant expressed frustration with their lack of success in previous calls for power. They have been involved four times and have not been successful, but have seen the larger corporations or those that have connections to the corporations be successful. It was indicated that all four projects that they proposed were clean, owned by First Nations, and all four are off the current grid.

There was frustration about the requirement to pay to be connected to the grid when BC Hydro does not pay for being on their territory.

There were a number of comments with respect to interest in having BC Hydro include First Nations in their proposed plan to meet future electricity demand:

- It was noted that BC Hydro needs to recognize First Nations' proposed plans for energy. The participant stated that their First Nation has a couple of projects that have been completely overlooked because of the cost factor and this needs to be looked at. Energy is not cheap in

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the north and BC Hydro buys it in the south because it's cheaper. However, First Nations in the north have a lot more resources than First Nations down south and can meet the potential future increase in the demand for electricity of 20%-40%.

- A comment was made that there needs to be clarity on how they can be involved. A 40% increase in demand is a lot and it has to come from First Nations. There are First Nations that are already on board, but BC Hydro does not want to recognize this. A participant questioned whether this was due to racism. It was suggested to let First Nations tell BC Hydro what First Nations have rather than BC Hydro telling First Nations what BC Hydro needs. It was stated that First Nations have territories that can produce energy and it is very sustainable and will not encroach on wildlife and fish. Let First Nations do the work of meeting the 40% increase in demand. First Nations can tell BC Hydro how First Nations can fill the gap because they know.

There were several comments made regarding First Nations involvement as or with independent power producers as follows:

- When you go to First Nation territory the First Nation should be respected. First Nations should have first right of refusal and a first right with a joint venture on a project.
- There was frustration expressed with what was referred to as BC Hydro's permitting process. Communities spend millions of dollars finding energy in their territory but BC Hydro will not issue permits. It was requested to have this issue brought to the top of BC Hydro to understand that First Nations want to develop their own energy. It was stated that it needs to be solved at the political level. [BC Hydro assumes this is a reference to energy purchase agreements rather than Crown permits. BC Hydro does not issue Crown permits.]
- A participant raised concern with the strain the calls for power put on their First Nation community as they receive many requests from interested proponents and First Nations must do the due diligence on each.
- It was noted that BC Hydro will not pay for First Nations to pursue projects in BC Hydro energy calls. The participant's First Nation made a proposal and it was rejected as being too expensive. The participant said it may be expensive by today's standards, but may not be down the road. The participant also noted that they might not have to destroy territories and flood areas. The participant stated their First Nation just wants to burn stored garbage. The participant was frustrated with the electricity call process and the amount of resources, time and money spent on these calls.
- There was an interest in having First Nations work on projects. There are different mining offices and other companies coming into their territory and they need to start planning for their youth, as they have a large population with many youth.
- There was an interest in having BC Hydro be open to plans such as co-generation as it was stated that First Nations can use their resources and sell the energy back into the grid and make revenue off that.

One participant believed that BC Hydro was a "bully" in its dealings; the First Nation was involved in a mine expansion which was without hydro power because it was stated that BC Hydro made unreasonable demands for security and wanted First Nations' consent without revenue sharing.

Additional Comments

Employment Opportunities for First Nations

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A question was asked about whether BC Hydro would be willing to hire their members to install the smart meters as they have the experience.

A participant indicated that their community is on BC Hydro's vendor list and that they have asked how they can work with BC Hydro on vegetation management. There was frustration in the process as they believe that they are being proactive in finding work for their members but BC Hydro is not considering their ideas. Their community has the capacity and they just need the opportunity. They would like to see a program that will work with First Nations in their traditional areas.

It was stated that First Nations have a large population and there are many youth. First Nations have to start planning for their youth. The participant recounted that they had to withhold support for a project because it did not have First Nation employment.

Revenue Sharing

Several participants would like to see revenue sharing and other forms of compensation as follows:

- It was asked what benefits First Nations will get out of the deals that BC Hydro makes with their communities. First Nations would like to see revenue sharing as an option.
- A participant shared an instance where a mining group refused to offer their community 50% shares and 50% revenue. They indicated that the discussions should include shares and revenue as in some cases they have power lines going through their territory.
- A participant noted that they would like to see revenue sharing and participation in the stock market. The participant stated that their First Nation needed 10-15% compensation. It was stated that a form of compensation is where the relationship can begin.

Attributed Comments

I would like to state that I am not here for consultation. I have a serious problem with someone coming to our territory and talking consultation without accommodation. Whenever there are activities in our territories it creates damages. In 1956, Alcan come to our territory and destroyed our river. We have been here since 1272 A.D. and we have been fishing. In 1911 we stopped because people consulted with us and we let them in to share our resources, but we have gotten nothing from them. Anything we have ever got from the governments is welfare, disease and damage to our territory. I have a problem when someone says they are consulting without accommodating for the damages that will be and has been occurring. – Chief Larry Nooski, Nadleh Whut'en

I am getting confused here. I absolutely get what you just said, this is the same story. You are going to get a 60% rate hike but we will save 30%. Where is anything for First Nations, what about compensation? We know what they are going to do, they are going to sell energy, it is a corporation. Everybody has been through this process and it is the same old thing. You take notes and bring it back to your headquarters. You are affecting peoples land and rights and there should not be a dollar figure put on that. British Columbians want surety but you cannot get that at the expense of First Nations. You are getting great feedback because it is the truth. We know there are plans out there. When it comes to First Nations consultation, when you go to the public are they put first and foremost and you just switch it to who you meet with? There are certain criteria that industry and government must meet before they move forward with anything on First Nations. When you get into BC Utilities Commission, BC Hydro, and government, they tell you to speak to different people and the wheels are spinning and

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we cannot get on board. It is the same old story and this is the truth. Please be truthful with us. – Chief John Ridsdale, Wet’suwet’en

I do not agree with the plan or with the Site C. We are planning for the future. We have input on these plans that are being implemented. I do not agree with Site C. I do agree with the other resources because First Nations have an opportunity to get involved there, there is a possibility. I do agree with that. For the most part the other stuff is good as long as First Nations are involved in the process. I read this as a plan process and I do not agree with this process. - Chief Geronimo Squinas, Lhatko Dene Nation (Red Bluff)

I would like to go on the record to say that my community and I do not see this as consultation and we would like BC Hydro to come to our community and talk to my members. - Chief Geronimo Squinas, Lhatko Dene Nation (Red Bluff)

I do not consider this consultation. Be proactive in having discussions with Lheidli T’enneh. Not just your administrative staff but to speak at a higher level. - Jackie Brown, Lheidli T’enneh

As an employee, I am not representing any member communities or their First Nations, so we are not consulting on their behalf and I am just here to receive information. – Carrier Chilcotin Tribal Council, Bert Groenenberg

We do not consider this to be consultation - Kwadacha, Nak’azdli, Tsay Keh’dene, Gitxsan, Takla Lake, Nazko, Lake Babine Nation, Nadleh Whuten, Lheidli T’enneh

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and tribal councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation.
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

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Requests

The following information requests were made during the workshop and have been recorded for follow up purposes.

1. Distribute the registration form to all participants

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

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BC Hydro Integrated Resource Plan: First Nation Consultation

Castlegar – March 21, 2011

Fireside Inn

First Nation /Organization Attendees

Ktunaxa Nation Council Society

BC First Nations Energy and Mining Council

BC Hydro Representatives

Charlie Weiler

Project Manager, First Nation Consultation

Danielle Van Huizen

Note Taker

Neutral Facilitator

Dan George

Four Directions Management Services

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- Electrification: Should BC Hydro be proactive in promoting electrification?

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Participant Input

Conservation and Efficiency

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency.

There were comments raised regarding the costs associated with conservation and efficiency as follows:

- It was indicated that the communities do not have the money to spend on upgrades and retrofits.
- Their community supports conservation and efficiency but are concerned with the stronger rate signals as their community is paying a lot for hydro already..

There were comments raised about the current conditions of the homes in their communities as follows:

- It was indicated that their homes were built a long time ago and are cold because of poor windows and insulation.

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- There was concern with the issue of radon in their homes as it may lead to health implications and the possibility of having their homes be condemned but they do not have the capital to upgrade their homes.
- It was felt that there needs to be incentives in place for new homes being built to meet conservation and efficiency.
- There was an issue raised with the building standards in the homes as they were built with electric heating because it was cheapest and easiest to install. However, the band offices need to take out the electric heating because it costs too much. The participant would like to see guidelines in place for how these houses should be designed to be more efficient and save money in the long term. People will be happy to discuss this if the resources are there.
- There was an interest in understanding the cause for the heat loss their homes as they do not have inspectors that come by to check the homes.

There was an interest in supporting communities by educating someone in their community to be the champion for conservation and efficiency. They would like to build their capacity so that a First Nation can be the voice for conservation and efficiency.

There was an interest in having funds made available to undertake retrofits. It was indicated that any homes under R20 insulation would qualify to be upgraded, however many of their houses are between R20 and R30. The concern is that R20 insulation is appropriate for Vancouver, but their community is very different from Vancouver.

One participant stated that if BC Hydro is serious about demand side management, they will have to be more committed and it will cost money. Incentives are very small in comparison to the costs. Their communities do not have the money and without funding, conservation will not happen.

It was noted that in their community the lights are on 24/7 with people staying with others due to homelessness. Televisions are on all the time and washing machines run a lot. None of these meet the efficiency standards.

There was an interest to have BC Hydro consider partnerships with First Nations.

Electrification

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

One participant noted that it makes sense to pursue electrification because it would reduce greenhouse gases. Dirty coal is not a generation resource we should consider acquiring. However there was a concern that First Nations are already paying huge electricity bills.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Electricity Generation Options

BC Hydro would like to understand First Nations' perspectives on the three example portfolio options: Renewable Mix without Site C; Renewable Mix with Site C; Mix of Renewables with Site C and Gas-fired Generation.

A participant noted that solar is expensive to install and very little comes out of it. A participant stated their area has one of the best solar resources in the province, but it is not the best option. It is too expensive. However, solar hot water could be a huge benefit.

A participant stated that there is a little bit of money in wind. Small hydro was identified as a need, but environmental impacts, including impacts on streams and fish is a concern. There is a concern that small hydro may have impacts on the streams and on the fish.

Regarding gas fired generation a participant does not believe that it is an efficient means of meeting peak demand.

With example Portfolio One - Renewable Mix with no Site C (i.e. run-of-river), it was indicated that it may come with development and activity within First Nations' territories. This will have impacts and environmental impacts should be avoided. However, there will also be jobs, which is of interest.

For example Portfolio One-Renewable Mix with no Site C, back-up could be regional storage facilities as they require less transmission lines and therefore would have lower environmental impacts.

Biomass was identified by one participant as a resource option of interest.

A participant did not want to say anything about Site C because it is in someone else's territory and was someone else's decision. It was stated that because Site C is in someone else's territory that BC Hydro needs to talk to them about it. There were also concerns about Site C, but it was stated by a participant that they are not necessarily opposed to it.

It was indicated that with the addition of Site C, there is less incentive for BC Hydro to purchase electricity from local projects that have less environmental impacts.

Regarding example Portfolio Three - Renewable Mix with Site C and Gas-Fired Generation (within 93 % *Clean Energy Act* target), a participant stated that gas or coal generation is generally not in their best interest and should be BC Hydro's last option if they cannot get it anywhere else. The participant stated that they would like to stay away from gas or coal if there is an interest in reducing greenhouse gas emissions.

Economic development was an important consideration in the discussion of the example portfolios:

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

- There was an interest in more jobs in their communities and dispersed regional jobs. They would like to see job opportunities and apprenticeships for their young people and there was an interest in having those opportunities close to home.
- From a business perspective a participant noted that example Portfolio Three- Renewable Mix with Site C and Gas-Fired Generation (within 93 % *Clean Energy Act* target) has the lowest potential for their Nation to get involved.
- If either example Portfolio Two- Renewable Mix with Site C or Portfolio Three- Renewable Mix with Site C and Gas-Fired Generation (within 93 % *Clean Energy Act* target) were to go ahead, a participant hoped that BC Hydro would offset the loss of opportunity to the other First Nations by supporting economic development. Since their Nation would not have the direct opportunity to participate in the capital projects, they would hope that BC Hydro would support their community in different ways.
- It was suggested that BC Hydro could work a lot closer with First Nations on run-of-river projects if there is an interest in acquiring that generation. The revenue from those projects could be used to pursue energy efficient homes.

Transmission Planning

BC Hydro would like to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to transmission planning.

It was noted that BC Hydro needs to speak to every First Nation and community in the province in order to understand all the interests and whether they are okay with the development in that area. It is important to get an understanding of the interests from every geographical area.

There was worry about the impact of transmission. It was stated that projects need to go through environmental impact assessments first.

A participant stated that if you are going to have a cluster of projects, it does make sense to take a proactive approach because in the end, it will cost less. The participant noted there is uncertainty whether all projects will be approved and developed.

It was stated that their community does not think there will be new transmission lines within their territory so they would have less of an issue with this. However, a participant thought that the proactive approach makes sense as it does not make sense to have transmission lines paralleling each other. The participant could not find reasons not to choose the proactive approach.

Export Market Potential

BC Hydro would like First Nations' perspectives on whether BC Hydro should build clean generation for the purpose of exporting electricity to other jurisdictions.

There was an interest in revenue sharing in relation to exports.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

A participant noted that there were pros and cons to export. There was concern that it would result in more independent power producers that may have an impact on the environment, however it could also provide jobs.

There was concern that BC Hydro controls the price for independent power producers and there are fewer opportunities for independent power producers to capture the real value of the projects.

Regarding the point on whether we import electricity from other jurisdictions, a participant indicated that it would depend what sources that power comes from and what the environmental impact will be from those sources.

Clean or Renewable Energy Development

BC Hydro would like to understand what First Nations' interests are in clean or renewable energy development in First Nation's communities.

A question was asked as to whether BC Hydro can support communities in exploring opportunities as they do not have the capacity to do the feasibility studies or research. If there is potential for renewable energy development in the 20 year plan they would like BC Hydro to help them in this.

It was noted how difficult it is for a community to get involved in clean energy projects as they are very complicated and there is very little expertise in this area.

There was an interest in seeing incentives for independent power producers to work with First Nations such as the requirement of 51% First Nations' participation. Another suggestion was to consider having a separate call for power specifically for First Nations.

It was noted that First Nations need to be a part of a potential project. It could be the difference between a project going forward or not.

It was indicated that there should be a province-wide agreement where a certain number of First Nations have ownership on projects. Another possibility could be First Nations ownership of transmission lines.

It was felt that there may be an opportunity for First Nations with the BC Hydro's Smart Metering program. It was suggested that a community can supplement their energy with solar or wind and if they generate more than they need they could sell it back.

Participants noted that they would like to see economic development in their community as follows:

- There was an interest in economic development at the local community level and local jobs and training. To a lot of people mobility is an objective, but it does not fit with rural people that have an attachment to the area.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

- One participant stated that their Nation does not have a single member working for BC Hydro.
- A participant shared their frustration with the lack of assistance from BC Hydro on how to become qualified for positions within BC Hydro. They would like to understand what it is that BC Hydro is looking for.
- Another participant stated that their community is looking for an overarching opportunity and not just one hire.
- First Nation job creation has to be a higher priority. A participant indicated that their Nation is also getting ready to make First Nation jobs within BC Hydro a priority.

Attributed Comments

There is an issue of past projects and past infringements. There is destruction of archaeological sites and we have raised the issue of revenue sharing. Also, the issue of consultation and past grievances was raised in Vancouver in September but you are still going about it the same way even though we felt differently. – Bob Luke, Ktunaxa Nation Council Society

BC First Nations Energy and Mining Council (BCFNEMC)

The BCFNEMC introduced themselves and noted that they will be participating in all nine Integrated Resource Plan sessions. They also noted that they have a representative on the Technical Advisory Committee. They described their role in the process as follows:

- To speak to issues or formulate positions on issues that are relevant to all First Nations;
- To support and facilitate participation in the meetings and to provide a voice on behalf of those First Nations and Tribal Councils that cannot or choose not to participate. They noted that they are not attending meetings to replace First Nations engagement and they do not purport to represent any First Nation
- At the end of all the sessions they will compile a formal response to BC Hydro on their perspective of the process and the issues they have heard.

Where comments were made by the BCFNEMC on specific topics in the session, they are included in these summary notes.

Requests

The following information requests were made during the workshop and have been recorded for follow up purposes.

1. To have notification about the draft plans come directly to the participants who attended the meeting.
2. To have information on whether BC Hydro has a measure of how they rate their success in terms of meeting the plan itself.
3. Consider holding the next regional workshop in Cranbrook.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Summary and Wrap-up

Dan George thanked the participants for attending the workshop and providing their input and perspectives.

Charlie Weiler outlined next steps in the consultation process and additional opportunities for First Nations to participate in the development of BC Hydro's Integrated Resource Plan as follows:

- Attend upcoming public open houses and stakeholder meetings;
- Provide written comments;
- Visit the BC Hydro website: www.bchydro.com/irp

Participants were provided BC Hydro's brochure containing information about opportunities with BC Hydro including employment, business, sponsorship and donations, remote community electrification as well as information on energy savings kits.

This summary of First Nation input is not intended to be a verbatim transcript of the workshop.

Appendix 12 — 2012 Workshop Summaries of Feedback

Integrated Resource Plan Appendix 7G
BC Hydro Integrated Resource Plan:
First Nation Consultation

Campbell River – June 26, 2012
Coast Discovery Inn

First Nation / Organization Attendees

Brian Watson	St. Mary's Band
Chief Jeff Cook	Huu-ay-aht First Nations
Chief Ralph Dick	We Wai Kai Nation (Cape Mudge)
Donna Kennedy	Qualicum First Nation
Gordon Kennedy	Qualicum First Nation
John Jack	Huu-ay-aht First Nations
John Lawson	FIRST NATIONS ENERGY AND MINING COUNCIL
Katherine Frank	K'omoks First Nation
Ken Barth	KWAKIUTL DISTRICT COUNCIL
Krissy Brown	K'omoks First Nation
Lise Steele	We Wai Kai Nation (Cape Mudge)
Robin Dawson	Da'naxda'xw First Nation
Stan Coleman	Huu-ay-aht First Nations

BC Hydro Representatives

Charlie Weiler	Aboriginal Relations
Kenna Hoskins	Energy Planning
Loretta James	Aboriginal Relations

Neutral Facilitator

Dan George, Four Directions Management Services	Neutral Facilitator
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WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of Input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Campbell River regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Campbell River;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

Campbell River Workshop - June 26, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

There was a significant focus on First Nations opportunities to participate in independent power production and in BC Hydro's procurement of that power.

Participants expressed a desire for BC Hydro to involve First Nations early in power calls to help foster further First Nations participation in independent power production, but felt that First Nations first needed more information on BC Hydro's procurement objectives and how the procurement process works to successfully take advantage of participation opportunities.

First Nations procurement targets or rights of first refusal on procurement opportunities in their region were suggestions offered by participants as ways to increase First Nations involvement and reduce missed opportunities to generate revenue from clean or renewable energy production. Having points of contact within BC Hydro with whom First Nations could communicate directly, such as a regionally based liaison, was also identified as a way to improve First Nations participation.

Another identified barrier to First Nations participation in independent power production was a reluctance to invest in independent power production if there is uncertainty about the capacity of the transmission system to take on additional interconnection from producers. One participant was particularly concerned with the lack of capacity on the north island transmission system and raised this issue on many occasions throughout the discussion.

The view that the workshop did not constitute consultation was expressed, as was a concern about the upcoming provincial election and whether changes could be made by a new government to the Integrated Resource Plan after BC Hydro submits it for approval.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

Participants expressed interest in learning more about the clean and renewable objectives of the *Clean Energy Act* and the specific resources/technologies that are included in the "clean and renewable" definition.

There was curiosity about what the load forecast took into account (e.g., electric cars, variables like natural gas prices), as well as some concern about the use of natural gas to fill the demand/supply gap given its non-renewable and limited quantities. The impacts to First Nations that live where the gas is extracted to benefit consumers in other areas was also raised as an issue, citing a perceived parallel to Site C.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There was mixed feedback on the recommended actions relating to conservation.

On the one hand, there was support for or curiosity about curbing overall and peak demand through conservation measures, such as time of use rates and, as one participant offered, by approaches that utilize “peer pressure” to reduce demand, such as ranked comparisons between nearby households.

On the other hand, one participant expressed the view that conservation only postponed impacts on future generations because of inevitable growth in electricity demand. Others took issue with BC Hydro’s request that customers conserve more, as there was a perception that others, including BC Hydro and non-domestic consumers, would benefit from the conservation efforts of domestic customers.

It was suggested that it would be helpful for BC Hydro to provide customers with more education and concrete examples of the actual savings that can be achieved over time by conservation efforts that may be relatively expensive up front, but save money in the long run. One example provided was that there should be information for consumers on the long term cost savings associated with purchasing a high efficiency appliance with a higher purchase price rather than the cheapest one available, which will likely cost more in the long run.

2. BUILD AND REINVEST MORE

While clarification was sought on why Site C was needed, several participants indicated that they did not feel that the Campbell River workshop was the appropriate venue for a discussion of the recommended action relating to Site C, and that the appropriate place for that discussion was in the northeast. One participant suggested that BC Hydro’s discussion with First Nations in the north should include the potential benefit of Site C for the integration of renewable energy resources.

With regard to the recommended action on transmission requirements, there was a concern about who would bear the cost of the reinforcement given that it was tied to LNG and mining in the north.

Participants related the north coast transmission reinforcement to the issue of interconnection capacity in their region, raised earlier in the workshop (see above). Specifically, the concern was expressed repeatedly that a lack of interconnection capacity is limiting opportunities for independent power production, and a few participants indicated a desire to discuss this transmission planning issue further with the appropriate BC Hydro personnel.

One participant reminded BC Hydro to consider how everything is interconnected. The participant spoke about the importance of water to his people; that it was a lifeline that supported their traditional way of life, including fishing and hunting. The participant emphasized the importance of taking what is said in these sessions seriously, because when they talk to BC Hydro they talk about how their people survive. One participant noted that he was glad to be consulted on John Hart, despite the length of time it took to come to agreement.

3. BUY MORE MADE-IN-BC POWER

The procurement process identified in this recommended action was of substantial interest to participants; however, the feedback consisted largely of the concern already raised repeatedly in the workshop about the capacity of the transmission system to take on new interconnections from independent power producers. The concern over grid capacity was coupled with an identified need for First Nations to have access to technical expertise within BC Hydro to assist First Nations in making informed decisions with respect to investing limited time and resources in clean/renewable energy projects.

Integrated Resource Plan Appendix 7G

One participant whose First Nation was involved in two run-of-river projects was wary of further involvement in clean energy projects, as they are very expensive and time-consuming. The participant was of the view that money can be spent fast on these projects without results, and First Nations need to be wary of the risk of going into debt.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

Reflecting the high level of interest of participants in clean/renewable energy development, feedback focused on the procurement dimension of the recommended action relating to the north coast. Clarification was sought on whether the call would be local to the north coast or province-wide.

In this context, participants returned to their previously expressed concern relating to the capacity of the grid on northern Vancouver Island to support interconnections from clean/renewable energy producers. The view was expressed that a regional approach to planning that considered local employment and development (including sharing revenue from clean energy development) may make more sense than a province-wide approach.

Feedback on the pumped storage and gas-fired generation were limited to technical clarification questions.

REQUESTS

Provide contact information for the appropriate person in BC Hydro to speak to two participants that requested follow-up on transmission planning for northern Vancouver Island, and specifically to address the concern that interconnection opportunities for independent power producers may be limited in the region.

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro was looking for ways to engage First Nations on its 5-10 year outlook of activities and BC Hydro is seeking written feedback on how participants would like BC Hydro to engage them on its 5-10 year outlook of activities.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G

BC Hydro Integrated Resource Plan: First Nation Consultation

Nanaimo – June 27, 2012
Vancouver Island Convention Centre

First Nation / Organization Attendees

Ralph Wallas	Quatsino
John Lawson	First Nations Energy & Mining Council
Chris Thompson	Lyackson First Nations
Kathleen Johnnie	Lyackson First Nations
Denise James	Penelakut Tribe
Lisa Gallic	Tseshah First Nation
Adelynne Claxton	Tsawout First Nation
Lou Claxton	Tsawout First Nation

BC Hydro Representatives

Charlie Weiler	Aboriginal Relations
Kenna Hoskins	Energy Planning
Loretta James	Aboriginal Relations

Neutral Facilitator

Dan George, Four Directions Management Services	Neutral Facilitator
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WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of Input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Nanaimo regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Nanaimo;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

Integrated Resource Plan Appendix 7G

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

One participant offered their services to sit on the Technical Advisory Committee for the Integrated Resource Plan, recognizing that energy industry/technical experience was necessary for that participation.

The perspective was expressed that it is inappropriate for First Nations to comment on plans that might impact the territories of other First Nations. It was felt that the ability to provide appropriate feedback was limited by planning that proceeded on a province-wide view rather than a First Nations territory view. One participant said that it was not right to make decisions on anything outside of their First Nation's territory and this is why they want to see planning from a First Nations territorial view.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no comments or questions from participants on this aspect of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

Key feedback for BC Hydro on the recommended actions relating to conservation centred on the importance of BC Hydro taking a leading role in raising conservation/efficiency standards, as well as in influencing industry to adopt these standards.

It was also suggested that BC Hydro provide customers with an in-home device to track their energy consumption as they are not likely to buy it on their own and it supports energy conservation by enabling customers to track their own consumption.

One participant identified rental properties as less likely to adopt energy efficiency upgrades as the landlords do not pay the electricity bills and therefore have no incentive to pay for energy efficiency upgrades. The participants stated that conservation should not depend on whether a home is owned or rented. It was suggested that BC Hydro consider a targeted mechanism to reach homeowners of inefficient rental properties that result in high energy bills for tenants.

2. BUILD AND REINVEST MORE

A general concern with benefitting from power generation in other regions of the province (i.e., Site C, Revelstoke 6), but not having to deal with associated impacts, was voiced as a barrier to providing feedback in relation to this set of recommended actions. This concern related to an earlier comment that it was inappropriate for First Nations to pass judgment on plans that may result in impacts to the territories of other First Nations.

Integrated Resource Plan Appendix 7G

There was disagreement with the characterization of the installation of a sixth turbine in the Revelstoke powerhouse (i.e., Revelstoke 6) as having a relatively small or minimal incremental environmental footprint. The participant was concerned with the potential downstream impacts and stated that there was not enough information on these potential impacts to provide feedback.

Concern was also expressed regarding the exemption of Revelstoke 6 and other exemptions from the British Columbia Utilities Commission process, which was perceived as a “get out of jail free card” for BC Hydro.

There also seemed to be a perception among participants that, even though they were being told that Site C and Revelstoke 6 are not yet confirmed, the other actions within this set appeared to have an undue reliance on Site C and Revelstoke 6 as projects that will be implemented. There also seemed to be a view that presumed reliance on Site C and Revelstoke 6 had the effect of “babying” the liquefied natural gas (LNG) industry, when BC Hydro ought to be negotiating with that industry to self-supply.

With reference to the recommended action regarding transmission requirements participants felt that information relating to EMF was important to provide First Nations.

3. BUY MORE MADE-IN-BC POWER

Feedback on the recommended action regarding procurement options centred on the preference for acquiring power closer to the consumers of that power, rather than exporting power from one region where impacts are experienced, to another region for the purposes of providing electricity to the importing region. A participant sought targets for producing power closer to the consumer and the incremental introduction of programs that will create long term solutions. Germany was held up as an example of a country that has moved toward more local power generation.

With regard to particular resource options, there was a view that First Nations need more information about what kind of options BC Hydro would accept in a power call. One participant would like to see solar energy used to power the stations required to charge electric vehicles.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

Several questions were asked seeking more information about and between the recommended actions included under this heading.

Concern was expressed by one participant that there was not enough information and/or understanding to provide feedback on this set of recommended actions.

One participant perceived that there was a conflict between BC Hydro’s objectives of wanting the domestic market to conserve, while at the same time considering electricity service to support entire industries.

BC FIRST NATIONS ENERGY AND MINING COUNCIL (FNEMC)

The FNEMC’s representative at the session advised participants that the FNEMC does not intend to speak for individual First Nations; rather, its role was to comment on the Integrated Resource Plan from a provincial perspective on common issues raised across regional workshops. Participants were also advised that FNEMC had commented on the Integrated Resource Plan in 2011 through two reports, and would be providing two reports again, one as a result of its participation in the 2012 First Nations regional workshops and another as a result of its participation on the Technical Advisory Committee.

Integrated Resource Plan Appendix 7G

Participants were advised by FNEMC's representative that the organization was present at the workshop to represent some kind of voice for those that cannot attend, as well as to speak about issues or common issues that come out at the workshops. The representative stated that the FNEMC is in a position to comment on these from a provincial perspective, and is here to raise issues seen with the Integrated Resource Plan from that perspective and to ensure that First Nations are made aware of these issues.

Participants were advised that the FNEMC would provide a summary report to BC Hydro, as a general statement on behalf of First Nations in the province, as a general representative of First Nations and not as representative of any specific First Nation. Participants were directed to contact the FNEMC and/or Dave Porter, the CEO of the FNEMC, if they have concerns with the process, and the FNEMC would bring those concerns forward to BC Hydro. Participants were also advised by the FNEMC that, as a technical representative that attended all the Technical Advisory Committee meetings, the FNEMC would be providing a report to BC Hydro from a Technical Advisory Committee perspective as well.

The FNEMC was asked by a participant to explain its protocol with BC Hydro. The FNEMC representative explained that it is an agreement between BC Hydro and FNEMC to work on encouraging energy projects for First Nations around the province, and to establish cooperation/collaboration between BC Hydro and BC First Nations. The FNEMC and BC Hydro held a First Nations workshop on clean energy development, and the FNEMC has worked to support biomass and other energy projects for First Nations around the province.

The FNEMC was also asked whether a report for BC Hydro would be made available to First Nations before submission to BC Hydro. The FNEMC representative indicated that the FNEMC would prepare two reports, one on the eight workshops, and another report based on Technical Advisory Committee participation. Both reports would include recommendations. How the FNEMC will report to First Nations leadership and how it will be finalized is being decided within the FNEMC, but a process of communication will happen; the timing is just uncertain.

A participant indicated that they had not seen the FNEMC reports from the 2011 regional workshops and Technical Advisory Committee meetings, presumably because that type of information tends to go to leadership. The FNEMC representative committed to checking into the distribution of the reports, which the representative believed had been distributed to all 203 First Nations, accompanied by a letter that indicated the FNEMC would be participating in the Integrated Resource Plan process. BC Hydro indicated that these reports had been included in the BC Hydro Integrated Resource Plan First Nations Consultation Interim Report, which was available on the BC Hydro website (www.bchydro.com/irp).

REQUESTS

There was a commitment made by BC Hydro to connect a one participant with a BC Hydro representative to discuss specific concerns related to consultation on the Integrated Resource Plan.

NEXT STEPS/CLOSING

BC Hydro outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

Integrated Resource Plan Appendix 7G

At the end of the session, Charlie Weiler explained that BC Hydro was looking for ways to engage First Nations on its 5-10 year outlook of activities and BC Hydro sought written feedback on how participants would like BC Hydro to engage them on its 5-10 year outlook of activities.

A participant wanted to know or be advised by BC Hydro on how their comments were considered or not considered in the finalization of the draft Integrated Resource Plan.

One participant also expressed concerns related to the nature and timing of the consultation process for the Integrated Resource Plan. For example, there was a view that, for this to be considered legal consultation, comments should be attributed to specific First Nations. Moreover, at least one participant informed BC Hydro that the August 13 deadline for written comments would not allow for an internal discussion within that participant's First Nation, as they would not be meeting again until September. This was understood as limiting that community's ability to respond to BC Hydro, particularly with regard to perceived "new" information not presented in 2011 (examples of new information provided were Revelstoke 6 and LNG). Based on this inability to provide feedback by a date that would allow for its consideration, it was felt that BC Hydro's approach may not meet legal consultation requirements.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G

BC Hydro Integrated Resource Plan: First Nation Consultation

Fort St. John – July 5, 2012
Quality Inn Northern Grand

First Nation / Organization Attendees

Jim Webb	West Moberly First Nations
Jeff Richert	TREATY 8 TRIBAL ASSOCIATION
John Lawson	FIRST NATIONS ENERGY & MINING COUNCIL

BC Hydro Representatives

Charlie Weiler	Aboriginal Relations
Kristin Hanlon	Energy Planning
Loretta James	Aboriginal Relations

Neutral Facilitator

Dan George, Four Directions Management Services	Neutral Facilitator
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- *BC Hydro's slide presentation for the Fort St. John regional workshop;*
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- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

One participant indicated that the "systems thinking" identified in the presentation depended on how the system was defined. From the participant's perspective, one of the deficiencies in BC Hydro's thinking historically, and more recently with regard to the water use plan around Site C, is how BC Hydro thinks about impacts of hydroelectric

Fort St. John Workshop
July 5, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

developments on the Peace River. The participant had been involved in water use planning for three communities situated on the Peace River, and had asked BC Hydro, in considering its water use plan and the removal of water and water licenses, that it involve those groups and people that are affected downstream. According to the participant, this has not been done. The participant also advised that his First Nation is in the final stages of releasing a vulnerability study on the effects of BC Hydro's water use plan on the Peace River Valley, and that BC Hydro's regime on the Peace is the single largest stressor on the integrity of the Peace-Athabasca Delta. The participant felt that the federal government is beginning to understand that there is a need for dialogue between governments -- federal, provincial/territorial (i.e., Alberta, Northwest Territories) -- to make everyone aware of the need to make significant changes to the BC Hydro regime on the Peace in the interest of its recovery. There is a growing awareness, the participant said, that these changes must be legislated into law; that the recovery of this area is mandated by law.

The participant felt that BC Hydro's approach to planning and decision making was at odds with "systems thinking." That is, for the participant, a plan made by BC Hydro without consulting First Nations that are affected downstream is not really planning using a systems thinking approach, nor is it being applied when BC Hydro acts as though it has total power to decide how to use the water within the Peace without looking at the needs and considerations of others. The participant saw this as a weakness in the system. The Peace River starts in the mountains and flows to the Arctic, and the participant felt that what is done in any one portion of it has the potential to affect everyone else. As such, the participant sought a live dialogue with BC Hydro on the significant adverse impacts of its resource plans on the natural regime in the Peace.

A participant said that he understood the reason for BC Hydro speaking to what the Draft Integrated Resource Plan does not do, but he thought this part of BC Hydro's presentation was inconsistent with what he had heard about the Integrated Resource Plan from others at BC Hydro. The participant felt that the Integrated Resource Plan also does not address planning from a First Nations view. He commented that most of Treaty 8 territory is not addressed in the Draft Integrated Resource Plan, but the part of the territory that is addressed is taken for granted, with rights and title not considered. The participant also felt that the BC government has, over the years, limited the options that BC Hydro was able to consider for the Peace, and that the constraints are now such that Site C is the only option available.

There was a perception that Site C is being treated like a done deal whereas First Nations are of the opinion that Site C is not a done deal. A participant perceived that government dictated policy to BC Hydro and BC Hydro, which is owned by government, acts as an agent of government. The participant saw no real distinction between BC Hydro and government. The participant felt that there is a bias or prejudice toward Site C because of a long-standing government policy of maximizing the hydroelectric potential of the Peace and Columbia. This policy, in the participant's view, has resulted in the BC government acting as if its right to make decisions about maximizing the hydroelectric potential of the Peace is somehow superior to the rights of Treaty 8 peoples to occupy and use the lands that will be potentially flooded as a result of Site C. The participant said that it was not proper for government to make decisions that affect these First Nations and to limit the discussion to mitigating the impacts of the current activity without looking at the historical impacts as well. The participant was of the view that the process of consultation on the Integrated Resource Plan was flawed because it wrongfully relies on this policy of maximizing the hydroelectric potential of the Peace, rather than on reconciliation between BC Hydro, the BC government, and First Nations. Reconciliation, to this participant, meant considering the optimization of hydroelectric potential in relation to values other than economic ones (e.g., historical, cultural, traditional, among others), which he felt was not being done. In his view, this lack of reconciliation at the planning stage was counter to direction from the courts. (The participant referred to the court's decision in *West Moberly First Nations v. B.C.*) The participant stated that his First Nation is not against hydroelectric development, but

Integrated Resource Plan Appendix 7G

that they are against hydroelectric development that pursues the “maximization” policy at the expense of reconciling hydroelectric development with First Nations rights. These two things – development and reconciliation – were understood as compatible if viewed through reconciliation. In the participant’s view, to say that there should be no development because it interferes with First Nations rights would be wrong, as would BC Hydro saying it is going to use water without regard to First Nations rights. The participant stated that this reconciliation or cooperation must start with the planning process for the Integrated Resource Plan.

There was acknowledgement that BC Hydro is pursuing a number of good things to help First Nations relationships, but that the relationships BC Hydro has with First Nations are coloured by the negative history of those relationships, as well as the current approach of BC Hydro and the BC government on Site C. The two rivers policy for the Peace and Columbia Rivers was viewed as an exclusively economic approach that First Nations find troubling and inconsistent with Treaty 8, the courts, and their own views. The government and BC Hydro should approach planning on the Peace in the context of real ecological limits. It was suggested that a regional strategic environmental assessment would be an effective tool for informing an Integrated Resource Plan.

One participant described that the government’s “taking up” right under Treaty 8 needed to be understood and balanced against the right of First Nations to have the land that was not taken up to pursue a traditional life; however, it was understood by this participant that cumulative effects of industrial and hydroelectric development in the region have left First Nations with virtually no land that has not already been taken up or impacted in some way. The Integrated Resource Plan, and the further inundation of the land by Site C, was not understood by this participant to have taken this into account; rather, it was perceived that the plan continues to be dominated by economic values, and makes no effort to address, or is even dismissive of, values that cannot be measured using only economic indicators.

A participant perceived a contradiction between the objectives of the *Clean Energy Act* to limit the use of non-clean sources of energy like natural gas, and the government granting an exemption to this resource when used for powering the liquefied natural gas (LNG) industry. This exemption was viewed as false and opportunistic, leading to a comment that for dialogue between BC Hydro and Treaty 8 to be meaningful, there would need to be deep consultation on the *Clean Energy Act* and the gas industry. In the opinion of the participant, this consultation has been inadequate.

The consultation on the Integrated Resource Plan was also viewed as inadequate because of the province-wide rather than regional approach that BC Hydro has taken to the planning process to meet government expectations. One participant felt that the decision to proceed on this basis rather than using a First Nations territorial view was not the only decision that could have been made. Planning up from a territorial or regional perspective was understood as more conducive to incorporating First Nations concerns, while the non-territorial approach was seen as producing a Draft Integrated Resource Plan based on economic imperatives. The participant felt that this would cause problems down the road because, in his view, it does not reflect First Nations concerns. Instead it was suggested BC Hydro could plan from a regional perspective and that deeper consultation is required.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro’s presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

Integrated Resource Plan Appendix 7G

There was a view that BC Hydro and the BC government were not consulting with First Nations on the Integrated Resource Plan in a way that is consistent with the findings of recent court decisions or that is in the spirit of reconciliation. It was stated that First Nations do not want to impose a solution to these perceived deficiencies, but BC Hydro should be working in the spirit of reconciliation as directed by the courts.

BC Hydro's understanding of "cost effective" was understood as limited by an economic perspective and does not consider "externalities." First Nations were paying the cost of BC Hydro development with their traditional values, which they can no longer embrace because of that development. The participant did not consider this cost effective, nor BC Hydro's approach to addressing the peak capacity gap by, in the participant's opinion, viewing the maximization of the hydroelectric potential of the Peace River as the only option to address that gap. It was suggested that BC Hydro has limited its options by taking the approach of maximizing the benefits of the Peace versus other large hydro projects that could also generate the needed peak capacity. The downstream impacts of this perceived "maximization" of the Peace approach discussed in detail earlier in the session were not factored into the cost effective equation.

A participant suggested that BC Hydro seemed to have applied a perpetual growth mentality to the Integrated Resource Plan, and questioned whether BC Hydro has adequately considered the downside risk on forecast electricity demand (e.g., economic downturns and real estate corrections, possibility LNG load will not materialize, increasing BC Hydro debt)

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no questions or comments from the participants on this part of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There were no comments or questions from participants on this set of recommended actions.

2. BUILD AND REINVEST MORE

There was strong opposition to Site C. It was suggested that the drivers behind this recommended action are the perceived policy of maximizing the hydroelectric potential of the Peace and the prioritization of economic values. Also, there was a perceived lack of any alternatives to Site C, such as geothermal. It was suggested that the reason geothermal has not been a priority is because of organizational culture and because politics and economics have been dominated by the hydro-electric regime.

One participant said that First Nations were only being given an opportunity to have input on something that is going to be built anyway, and they are frustrated. All they can see stretching in front of them is a big fight. This

Integrated Resource Plan Appendix 7G

participant was of the view that, the Integrated Resource Plan is focused, on giving the government strength to win the fight without having to reconcile the issues that have caused the fight.

3. BUY MORE MADE-IN-BC POWER

Feedback on this recommended action characterized the Integrated Resource Plan as a “one-trick pony” that was completely dependent on Site C, and that this posed problems for the plan if Site C could not proceed. The depth of First Nations’ opposition to and determination to stop Site C was particularly emphasized. One participant said that First Nations do not understand the rationale behind government efforts to drive Site C forward despite their objections. First Nations feel that these efforts have made no attempt to reconcile their rights and interests. This was not to say that First Nations are against BC Hydro development or electrification; rather, they are against the loss of another substantial part of the Peace River, which is part of their way of life. The participant expressed the view that the government owes it to First Nations to maintain their treaty rights, and that it was wrong to take more away.

The adequacy of consultation related to the Integrated Resource Plan was revisited by participants. The view was expressed that the process had not been comprehensive, robust or flexible enough for First Nations to engage with BC Hydro on the development of the Integrated Resource Plan. One participant held the view that there had been no communication on how First Nations input in the 2011 consultation had been incorporated into the Draft Integrated Resource Plan, and that, while BC Hydro might see itself at the end of a process, First Nations felt they had yet to be engaged in that process. A participant made clear that a plan built around Site C has a fatal flaw and leaves very little that is constructive as a response.

The perceived top-down approach was not working, and it was suggested that a bottom up or grassroots approach would be more effective and progressive.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

There was a negative reaction to the recommended action on pumped storage, with one participant describing it as “frightening.” Feedback on gas-fired generation option was more favourable. There was the view that minimizing its use locally to reduce greenhouse gases, while at the same time exporting it for use globally was inconsistent, and that if it is to be considered “clean” in an export context, then it should be treated the same way in a domestic context. In reference to gas development in the northeast, a participant suggested that it would make more sense for the gas industry to use the gas for power rather than electricity.

The perceived dependency of the Draft Integrated Resource Plan on Site C was again expressed as a concern, as was the view that it was built on an assumption that there is no limit to development. There was a perception that the draft plan disregards sustainability, biodiversity, and First Nations rights. A related concern with Site C was the future development that it will stimulate across the province. There was also a concern that developments in different industries in the north are occurring without a broad understanding of development across these industries. Also raised again as a concern was the use of a province-wide approach rather than a regional approach to the planning process.

The lack of capacity of First Nations to review the Draft Integrated Resource Plan, digest and develop informed understandings about it, then engage in a meaningful dialogue with BC Hydro, not to mention the costs associated with these activities, was cited as a barrier to the deep consultation that participants felt was necessary. A

Integrated Resource Plan Appendix 7G

participant stated that First Nations had invested significantly in the Northeast Transmission Line (NETL) process before BC Hydro announced it was not going to be advancing it, yet BC Hydro was seen as now as quibbling over the costs of that involvement. There was therefore a feeling among participants that there was no indication that BC Hydro understands their capacity issues and will be responsive to them.

Also related to consultation expectations, another participant stated that there were some fundamental discrepancies between the objectives of First Nations and BC Hydro's mandate. It was recommended that BC Hydro tell government that it needs to listen to the contradictions.

REQUESTS

There were no specific requests made during the session.

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

In revisiting many of the concerns that had already been expressed earlier in the workshop, one participant said that before anyone considers Site C, BC Hydro and the BC government need to settle with First Nations regarding the impacts of Williston and Bennett Dam. The participant held the view that BC Hydro has not demonstrated that it caused harm to First Nations and is willing to talk about the past. From his perspective, First Nations and BC Hydro do not have a relationship, and if they do, it is a bad one. He felt that recommendations had been made by First Nations on what could be done, but that there has been no further discussion. First Nations, he continued, do not want to live in a world of conflict, as it hurts in the heart; the experiences have been painful. He recounted how he had been asked what would happen if Site C is built and the valley is flooded. He had responded that if First Nations lose the land, then they lose their stories, because their stories are connected to the land, spiritually, culturally. In short, if First Nations lose their stories, they lose themselves – that is, all the things that are mediated by language. As such, flooding is not just the loss of land; it is a loss of the cultural connectedness to who First Nations are, individually and collectively. Consequently, it is the death of values, identity, and often of individuals, who give up. The participant closed by saying that this is an important place, that the communities who live in this place have not had what the treaty promised, and he asked BC Hydro to understand that Site C has implications for First Nations as peoples.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G
BC Hydro Integrated Resource Plan:
First Nation Consultation

Prince George – July 6, 2012
 Coast Inn of the North

First Nation / Organization Attendees

Alison Johnny	Saik'uz First Nation
Art Sampare	Gitsegukla Band
Beverley Clifton Percival	Gitxsan Treaty Society (Hereditary Chiefs)
Beverly Ketlo	Nadleh Whut'en Band
Bonnie Mowatt	Gitxsan Treaty Society (Hereditary Chiefs)
Chief Clifford Lebrun	Lhtako Dene Nation (Red Bluff)
Chief Fred Sam	Nak'azdli Band
Chief Ralph Pierre	TI'azt'en Nation
Clifford Sampare	Gitsegukla Band
Colin Teegee	Takla Lake First Nation
Frank Alec	Lake Babine Nation
Frank Boucher, Councillor	Lhtako Dene Nation (Red Bluff)
George George Sr.	Nadleh Whut'en Band
Gord Haines	Lheidli T'enneh First Nation
Jackie Brown	Lheidli T'enneh First Nation
John Lawson	FIRST NATIONS ENERGY AND MINING COUNCIL
Keith West	Takla Lake First Nation
Laura Jack	Nee-Tahi-Buhn Indian Band
Leonard Thomas	Nak'azdli Band
Mike Robertson	Cheslatta Carrier Nation
Chief Richard Peters	Cheslatta Carrier Nation
Pius Jack	Nee-Tahi-Buhn Indian Band
Sherry Shaw	Nazko First Nation
Shirley Wiltermuth	Lheidli T'enneh First Nation
Simon John	TI'azt'en Nation
Terrence Paul	Nazko First Nation
Wilf Adam	Lake Babine Nation
Dan George	Burns Lake

BC Hydro Representatives

Charlie Weiler	Aboriginal Relations
Doug Little	Energy Planning
Loretta James	Aboriginal Relations

Neutral Facilitator

Dan George, Four Directions Management Services	Neutral Facilitator
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Prince George Workshop
 July 6, 2012

Integrated Resource Plan Appendix 7G

WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Prince George regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Prince George;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

Participants expressed a desire for economic development opportunities/advantages in relation to BC Hydro's activities. For one participant, involvement in these opportunities should be pursued as partners with BC Hydro, not just as consumers. It was felt that, as partners, First Nations would receive something back from the development of their resources, which BC Hydro uses to power the province.

Many participants commented on the Draft Integrated Resource Plan in the context of traditional territories. There was the view that the Draft Integrated Resource Plan had too much of a financial focus, with no mention of First Nations rights, title and interests. There was disappointment that the planning process did not proceed from a First Nations territorial view. One participant felt that BC Hydro's province-wide approach excluded First Nations from negotiations on impacts to their lands. Another participant saw the approach as not respecting the land use plan of the participant's community, leaving the participant with the impression that BC Hydro was going through First Nations land without asking. A similar view was expressed by another participant, who felt that BC Hydro had left too little reserve land when putting in transmission lines, and had done so without compensation.

Concerns relating to the ability of First Nations to reasonably participate in the process of reviewing the Draft Integrated Plan were also raised. For one participant, this concern related to the capacity of First Nations to review and respond to the volume of material. For another, the timeline suggested that BC Hydro was trying to speed through the Integrated Resource Plan process, and that this might work against creating a respectful balance between BC Hydro and First Nations.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

Prince George Workshop

July 6, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

Participants showed interest in the difference between critical and average water conditions and in learning more about pumped storage.

There was also interest in becoming more involved with independent power production, but one participant said it was hard to find funding to support that involvement, and felt there should be a way for BC Hydro to help First Nations finance these projects.

Inadequate power to First Nations communities as a result of decades' old (single-phase) technology was cited as a barrier to economic development and a significant issue for First Nations communities. A participant stated that electricity service to First Nations communities must be brought up to 21st century standards. One participant noted that addressing these concerns with BC Hydro is intimidating because it is unclear how BC Hydro's business systems work.

Some participants expressed an interest in pursuing the development of geothermal resources.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no questions or comments from the participants on this part of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There were no comments or questions from participants on this set of recommended actions.

2. BUILD AND REINVEST MORE

Participants expressed interest in learning more about aspects of this set of recommended actions, including where to find more information on Revelstoke 6. With regard to transmission upgrades, participants wanted to know whether there were also plans to upgrade smaller distribution lines to communities, since the transmission upgrades recommended in the Draft Integrated Resource Plan were meant to address only large capacity lines. There was also interest in the Columbia Treaty Entitlement and the selling of power, particularly to California.

There was concern that the comments made by First Nations during the session had already been provided last year, yet it was felt that this input was not evident in the Draft Integrated Resource Plan. It was suggested that friction with First Nations starts with the projects recommended in the plan, and that the earlier First Nations are involved in

Integrated Resource Plan Appendix 7G

planning the greater the likelihood of First Nations buy-in and project success. It was also suggested that the plan should be introduced at the Union of BC Indian Chiefs meetings so it can be discussed among First Nations leaders.

There was also a concern that, at the same time First Nations are being consulted on the Draft Integrated Resource Plan, the forecast demand for electricity included in the plan identifies projects that are already in the process of seeking approvals, and a perception that utilities expansion is already happening.

3. BUY MORE MADE-IN-BC POWER

There was interest in the cost of power generated by Site C. There was also an interest in BC Hydro studying geothermal as a source of power.

Participants felt that that BC Hydro should be investing more in First Nations by helping them and small/remote communities become more involved in small independent power projects, even if it might be more expensive for BC Hydro to buy that power. Supporting economic development and improving the viability of these communities was viewed as good for BC and the economy.

It was suggested that BC Hydro needs to evaluate independent power projects located in the north that are supplying power in the north differently from projects in the north supplying electricity to the Lower Mainland. It was also suggested that BC Hydro needs to involve First Nations in lobbying government to support smaller, more costly First Nations power projects.

For one participant, it made more sense to produce power locally than building a new transmission line from Prince George to Williston.

While there was support for becoming more involved in independent power production, there was a concern that the timelines for BC Hydro to make decisions on whether to acquire power is too long and not in sync with the timelines of business.

There was also a view that First Nations are paying too much for electricity.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

There was an interest in learning more about other projects in the northeast (e.g., Montney basin) and gas-fired generation as it relates to the liquefied natural gas (LNG) industry, as well as an interest in knowing what feedback BC Hydro has received from other First Nations on LNG and fracking. There was also an interest in future BC Hydro energy procurement, as well as in how BC Hydro planned to approach procurement with First Nations.

One participant expressed opposition to natural gas. In this participant's view, run-of-river was cheaper and more sustainable than natural gas, which was not cheap when the cost of cleaning up emissions was taken into account. Another participant speaking as an individual and not as a representative of his First Nation expressed support for natural gas because the costs were borne by industry as opposed to everyone else, and the facilities to support it can be built close to the load. The participant also expressed the view that if natural gas is being used outside of BC as a power source, like China, there was no reason not to use it in BC for the same purpose, as the emissions were all going into the same atmosphere.

There was a concern raised at this point of the session in relation to consultation, with one participant stating that this was not a consultation process.

Integrated Resource Plan Appendix 7G

In the context of explaining the role of the First Nations Energy and Mining Council in the process for the development of the Integrated Resource Plan, it was stated that reviewing and responding to the several thousand pages of the Draft Integrated Resource Plan was a daunting task, and that it did not have a budget to serve as a technical resource to assist individual First Nations on the Integrated Resource Plan.

REQUESTS

Visit First Nations communities to talk about procurement opportunities.

Provide contact information for the appropriate person in BC Hydro to discuss upgrades for First Nations communities still served with old, single-phase technology.

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G
BC Hydro Integrated Resource Plan:
First Nation Consultation

Kamloops – July 9, 2012
Kamloops Convention Centre

First Nation / Organization Attendees	
Kirk Dressler	Williams Lake
John Lawson	FIRST NATIONS ENERGY & MINING COUNCIL
Dave Porter	FIRST NATIONS ENERGY & MINING COUNCIL
Lee Spahan	Coldwater Indian Band
Aaron Higginbottom	Williams Lake
Annie Major	Lower Nicola Indian Band
Lissa Nadeau	Skeetchestn Band
Deb Biddiscombe	Skeetchestn Band
Larry Thomas	Nooaitch Indian Band
Roy Fletcher	Llenlleyen'ten (High Bar First Nation)
Jennifer Morrison	Ashcroft Band
Jessie Archie	Canim Lake Band
Pam Theodore	Canim Lake Band
Sharon McLeod	Nooaitch Indian Band
Stuart Lee	Splats'in First Nation
Chief Larry Fletcher	Llenlleyen'ten (High Bar First Nation)

BC Hydro Representatives	
Charlie Weiler	Aboriginal Relations
John Rich	Energy Planning
Loretta James	Aboriginal Relations

Neutral Facilitator	
Dan George, Four Directions Management Services	Neutral Facilitator

WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

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Integrated Resource Plan Appendix 7G

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Kamloops regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Kamloops ;and*
- *A First Nations written feedback form.*

One participant suggested that, rather than the Site C project, it would be more viable to use other resource options, such as run-of-river, wind, and solar.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

There was interest in whether the province would meet its greenhouse gas emission targets. There was also interest in knowing if a change in government policy regarding the use of gas-fired electricity generation to power liquefied natural gas (LNG) plants would lead the government to consider natural gas development opportunities on First Nations reserve lands.

A participant encouraged BC Hydro to consider out-of-the box thinking by pursuing clean or renewable resource options like geothermal and the power generated by the ocean (e.g., wave, tidal).

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no questions or comments from the participants on this part of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There was an interest in having the amount of conservation savings communicated in a manner that was easily understood, rather than in gigawatt hours.

2. BUILD AND REINVEST MORE

It was noted that Treaty 8, as well as West Moberly First Nations, and non-First Nations communities that may be affected by Site C were opposed to its development. At this point of the presentation, the participants did not offer their own views on the Site C recommended action, except one comment that it could be a hot topic.

Kamloops Workshop

July 9, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

Concern was expressed over BC Hydro's characterization of Revelstoke 6 as having low or no environmental impact. Participants sought information on how adding this generating unit might affect lake water levels. There was a more general interest in knowing how much money BC Hydro allocates to study the potential effects of all its facilities on rivers and fish.

One participant expressed support for using the Columbia River Entitlement, but only as a short-term solution given the lack of other available options. The participant felt that BC Hydro should make investments in smaller renewable projects that are longer term solutions, even if those investments are more expensive.

3. BUY MORE MADE-IN-BC POWER

There was an interest in knowing more about the government's recent announcement regarding the use of natural gas to provide power to the liquefied natural gas (LNG) industry. One participant was interested in whether the announcement created an opportunity for natural gas projects to sell electricity to BC Hydro.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

There was a concern that BC Hydro might be subsidizing the extension of the grid to serve the liquefied natural gas (LNG) industry when that industry could produce its own electricity with natural gas.

BC FIRST NATIONS ENERGY AND MINING COUNCIL (FNEMC)

The FNEMC explained to the other participants that the FNEMC was working on behalf of First Nations to gather information on the Integrated Resource Plan and to prepare two reports, one based on the FNEMC's participation on the Technical Advisory Committee and the other based on its participation in the regional workshops, and that these reports will be provided to all First Nations chiefs. The FNEMC also had several general comments at the end of the session. It indicated that there was a serious omission in the Draft Integrated Resource Plan about how BC Hydro will respect the rights and title of First Nations in the province. It was suggested that BC Hydro needs to look at how the plan may be affected by the United Nations Declaration on the Rights of Indigenous Peoples. While BC Hydro had captured what First Nations had said during the first round of consultation in 2011, it was indicated that it was unclear how or where these concerns have been addressed in the Draft Integrated Resource Plan. Furthermore, there is nothing in the plan about First Nations being partners with BC Hydro or about how BC Hydro proposes to revenue-share with First Nations. Although it was acknowledged that some historical grievances have been addressed, they have not been fully addressed. First Nations had also expressed their desire for a regional approach to planning for the Integrated Resource Plan, and it was indicated that this was not evident. It was stated that BC Hydro's planning needs to more broadly consider all resources/industries (e.g., clean/renewable energy, oil and gas, mining), as well as the cumulative impacts of this development. Better access to BC Hydro programs and funding to help increase capacity within First Nations (e.g., to support conservation) was also raised as an issue. While there is money set aside for First Nations for the clean energy sector, funding for First Nations could be pulled together in one place so that First Nations could easily access it.

REQUESTS

Provide information on whether the amount that BC Hydro says it spent on aboriginal procurement in fiscal 2011 included archaeological contracts.

One of the participants wanted to see more specific visual project related information about Site C, including a map of the Site C Project.

Kamloops Workshop

July 9, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

BC Hydro was asked by a participant to think about, in its planning, how BC Hydro improves its relationship with First Nations, not only in the big picture, but also in the day to day.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G
BC Hydro Integrated Resource Plan:
First Nation Consultation

Terrace – July 11, 2012
Best Western Inn

First Nation / Organization Attendees	
Brian Tait	Nisga'a Village of New Aiyansh
Chief Amanda Zettergreen	Gitwangak
Claude Barton Snr.	Nisga'a Village of Gingolx
Dianne Shanoss	Gitanmaax Band
Chief George Williams Snr.	Nisga'a Village of New Aiyansh
John Ridsdale	OFFICE OF THE WET'SUWET'EN
Keith Clayton	Nisga'a Village of New Aiyansh
Keith Morgan	Gitwangak
Pauline Rubinato	Gitanmaax Band
Peter Stevens Jnr.	Nisga'a Village of Gingolx
Cora Kennedy	Kitselas
Jason Majore	Kitselas
Chief Mark Starlund	Gitanyow
Charles Morven	Gitwinksihkw
Victor Jim	Moricetown
Chief Judy Gerow	Kitselas
Keith Nyce	Haisla Nation (Kitamaat)

BC Hydro Representatives	
Charlie Weiler	Aboriginal Relations
Doug Little	Energy Planning
Loretta James	Aboriginal Relations
Chris Heard	Aboriginal Relations

Neutral Facilitator	
Dan George, Four Directions Management Services	Neutral Facilitator

WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Terrace Workshop
July 11, 2012

Integrated Resource Plan Appendix 7G

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Terrace regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Terrace;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

Several participants stated that, based on what BC Hydro had said about the Integrated Resource Plan, they did not consider this consultation.

There were several comments to the effect that First Nations want to be involved earlier in planning, and to have a say from beginning to end on all projects within their territories. One participant expressed that First Nations like to be involved at the beginning and not at the tail-end of planning, when the project is a done deal, and then have BC Hydro come to them to say it is doing this session. The participant suggested that this approach – BC Hydro coming to them after the plans have been made – was not planning from the bottom up, but the top down. It was also suggested that planning from the bottom up involves planning for perpetuity. A participant said that they think BC Hydro's mind is already made up. The participant hoped that BC Hydro would really hear First Nations and that the actions First Nations suggest will show up in the Integrated Resource Plan between now and the time BC Hydro implements it.

There was appreciation extended to BC Hydro for bringing forward the Draft Integrated Resource Plan and for the work that had gone into it. A participant felt that if they were going to be critical, they would have to offer an alternative. Sharing information with each other was the only way to move forward. There was a view that this sharing of information should also extend to agreements between BC Hydro and First Nations. Several participants did not want confidential agreements with BC Hydro, as they were seen to divide First Nations and create conflict. This is not a good way to build relationships with First Nations, and not a good way to do business. Rather, it is better to develop the economy in First Nations communities and the north; to help First Nations develop independent power projects, which in turn develops their communities. The participant relayed that far too many times they had seen First Nations pushed aside when the big contractors come in from big towns with their workers. The people that own the land should be the ones that benefit from any kind of development.

One participant raised a concern about the number of outages in their area (6 in the last 2 months and 18 last year), and said that BC Hydro does not say how long the outages will last when they occur. The participant said that, being at the end of the transmission line, their area was the last to be reconnected when these outages occur, and that they would like BC Hydro to have a look at this problem.

A participant described how their community is at the end of a transmission line with single phase power and unreliable electricity service. The participant suggested that being connected to a grid by single phase power is not really being connected to the grid at all. The community lacks amenities, has a high cost of living and high unemployment, and cannot attract investment. The participant's community wants access to the power going through their lands, even if there is a cost to stepping down the transmission voltage to enable this. Access to electricity will provide certainty and create opportunities for development.

Terrace Workshop

July 11, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

A participant said that their community was working on a small independent power project that did not proceed, despite all the work and money invested. The liquefied natural gas (LNG) industry will create huge demand for electricity and First Nations will supply renewable resources if BC Hydro would be willing to invest to help First Nations create local opportunities.

It was suggested that BC Hydro re-evaluate transmission costs for independent power projects located in the north and that any change in the evaluation criteria be communicated to independent power producers so it can be communicated to investors.

One participant offered that they had viewed gas-fired facilities across BC and Saskatchewan, and that there was a common observation about how clean and how quiet they were, with no smell; however, there was a concern about the environment, and it was not clear what the greenhouse gas emissions of these facilities were. The participant was aware that LNG plants were traditionally powered “inside the fence,” and questioned whether gas fired generation was the cheapest option. The participant was interested in knowing more about the implications of the government’s recent announcement that gas used to provide electricity to LNG facilities would be considered clean.

Also on the subject of natural gas, a participant said that they need to see the real costs of its development (e.g., construction, transmission, environmental, costs of clean up). In negotiating with LNG producers over the cost of electricity supply, the participant indicated that the price LNG producers sell natural gas to Asia should be considered, not just the lower cost of buying natural gas in Canada.

There was interest in the steps BC Hydro has taken to promote conservation, with specific reference to PowerSmart programs. A participant suggested that specific incentives for those with lower incomes to adopt PowerSmart initiatives may be discriminating based on income, which was understood to mean that everyone should have equal access to conservation programs.

There was also interest in participating in biomass projects. Another participant said that BC should capture some of the biomass market. It was noted that there was competing interests for biomass resources within the forestry industry. One participant was interested in whether there were reliable energy sources, other than biomass, upon which BC Hydro could rely, in particular geothermal. A negative view of wind power was expressed by a participant, who referred to wind farms as a blight on the landscape and not the best option for clean energy.

One participant said that First Nations want low electricity rates and to be able to sell their power from independent power projects to BC Hydro at a higher price. A participant said that they had to look at ways to power their house other than electricity, as it was too expensive, a view expressed by several other participants.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro’s presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

During this part of the session, one participant indicated that BC Hydro should stop exporting electricity.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no questions or comments from the participants on this part of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

A participant stated that the cost of building homes to bare minimum standards was already expensive for First Nations, and was concerned that it would be even more expensive for First Nations to build homes that allowed them to take part in conservation. There was interest in knowing what measures or help might be available to First Nations to help them build more energy efficient homes.

There was a concern with the high cost of heating with electricity, even when supplemented with wood. A participant felt that district heating through biomass, while expensive up front, could be a viable option for First Nations communities. The participant said that if BC Hydro was serious about real reduction in electricity consumption, it would help First Nations put a plan in place to invest in district heating, which the participant indicated has higher capital costs, but would provide long term payback.

There was a concern that if BC continues to grow as BC Hydro is forecasting, the province will run out of resources to generate electricity.

2. BUILD AND REINVEST MORE

There was an interest in the contingency plan in the event Site C was not approved. There was an observation that gas looked cheap compared to Site C based on current cost per megawatt hour, but that gas price changes and emissions were additional considerations.

Participants were concerned that, on top of rates and bills that were seen as already too high, they would have to pay even higher rates for upgrades to the existing system. A participant wanted industrial customers, not consumers, to pay for the transmission requirements of industry. It was suggested that BC Hydro hold more sessions like these in central locations to consult on and explain rate increases as they might be more acceptable if they were better understood. There was also a perception that smart meters were not providing a benefit.

Making reference to the Northwest Transmission Line, a participant expressed the view that the mining companies pollute the waters; that, from way back, power lines were put through their burial grounds. The participant felt that the plans for the Northwest Transmission Line were set by the time BC Hydro had come to First Nations communities, and that they were directed by their leaders to participate, because like every other project it would be going through anyway. It felt disrespectful, and creates mistrust with First Nations. The participant felt stuck with a decision made by others, and while they expressed appreciation about being advised of the transmission line upgrades, they were curious to know why the upgrades were needed. The participant said that we cannot continue

Integrated Resource Plan Appendix 7G

to damage the environment. The participant suggested that BC Hydro let First Nations be involved in discussions from the ground up, as there was a sense that the plans discussed during the session were already set and that First Nations were only being brought in at the tail end. The participant expressed that First Nations need to be able to trust that what they say means something, and the participant did not think that this was going to happen. The participant also expressed the view that there are linkages through nature, and that these can be seen now in the debris from Japan making it to the BC coast. It was also expressed that we must think for tomorrow, and for hundreds or thousands of years into the future. The participant felt that they did not have the answers for the people they represent, but that they needed those answers. While the participant said they appreciated the information presented in the session and the ability to vent, those assembled were having a discussion, not deciding. The participant said that First Nations need to be more involved, to know more, and for their people to live better. Echoing some of this sentiment, another participant added that the session provided good information, but that they wished they had known it earlier.

3. BUY MORE MADE-IN-BC POWER

There was interest in knowing what a run-of-river project entailed and whether it results in impacts to rivers.

There was concern that, according to numbers provided by BC Hydro, the relatively cheap price of natural gas compared to the price of clean energy acquired through BC Hydro's Standing Offer Program makes independent power production of clean or renewable energy uncompetitive with natural gas. There was a view that the new government policy to use natural gas to power LNG could kill clean energy projects. A participant suggested that there is uncertainty in BC Hydro's planning that is created by the balancing of different policy objectives, and that this uncertainty makes it difficult to find investors for clean energy projects.

There was interest in industry's financial contribution to the BC Hydro transmission lines or infrastructure that may be required to serve the load forecast. There was a concern that other customers are subsidizing industry for the costs associated with supplying electricity to its industrial developments. A participant indicated that, if consumers are subsidizing industry, they should benefit or be paid back.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

In relation to the recommended action on transmission, there was interest in being consulted before adding the new 500 kV transmission line. There were concerns expressed about the potential impacts of transmission lines, including potential health impacts of high voltage transmission lines, the impact on wildlife, and the use of pesticides under transmission lines. One participant stated pesticides under lines should be banned altogether.

There was interest in the economics of pumped storage.

BC FIRST NATIONS ENERGY AND MINING COUNCIL (FNEMC)

Dan George explained to the participants that the FNEMC was working on behalf of First Nations to gather information on the Integrated Resource Plan and to prepare two reports, one based on the FNEMC's participation on the Technical Advisory Committee and the other based on its participation in the regional workshops.

REQUESTS

There were no specific requests made by the participants.

Terrace Workshop

July 11, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G

BC Hydro Integrated Resource Plan: First Nation Consultation

Vancouver – July 12, 2012

SFU Segal Centre – Rix Room

First Nation / Organization Attendees	Done
Adeana Young	COUNCIL OF THE HAIDA NATION
John Yeltatzie	COUNCIL OF THE HAIDA NATION
Joanna Prince	FIRST NATIONS ENERGY AND MINING COUNCIL
David Benton	Gitga'at (Hartley Bay)
Jako Krushnisky	Gitxsan Treaty Society (Hereditary Chiefs)
Norm Fraser	KTUNAXA NATION COUNCIL SOCIETY
Melvin Patrick	N'Quatqua First Nations
Jolene Patrick	N'Quatqua First Nations
Alfred Setso	Old Massett Village Council
Ken Rea	Old Massett Village Council
Alan Davidson	Old Massett Village Council
Jessica Morrison	STO:LO NATION
Mike Goold	STO:LO NATION
Matthew Louie	STO:LO TRIBAL COUNCIL
Morgan Ritchie	Sts'ailes (Chehalis)
Michelle Thut	T'Sou-ke First Nation
Denise Birdstone	Tobacco Plains Indian Band
Sarah Gravelle	Tobacco Plains Indian Band
Dominic Hope	Yale First Nation
Jesse James	Yale First Nation

BC Hydro Representatives	
Charlie Weiler	Aboriginal Relations
Kristin Hanlon	Energy Planning
Loretta James	Aboriginal Relations
Nan Dais	Energy Planning

Neutral Facilitator	
Dan George, Four Directions Management Services	Neutral Facilitator

WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Vancouver Workshop
July 12, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop.

Integrated Resource Plan Appendix 7G

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Vancouver regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*
- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Vancouver;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

There was a comment that the "systems thinking" approach illustrated in the presentation was equally applicable to BC Hydro as it was to First Nations communities and there can be dysfunctional systems in both.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

There was a concern that natural gas might be considered clean for the liquefied natural gas (LNG) industry but not for others.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There was further concern expressed that natural gas might be redefined as clean.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There was a concern that BC Hydro might be setting the bar too low if it was establishing the annual savings target of 9,800 gigawatt hours based on what other utilities were doing. Rather, it was felt that conservation targets should be set on the basis of what is required from a sustainability perspective and how that might be achieved.

There was an interest in whether BC Hydro is an advocate of government regulating further conservation measures. There was also interest in knowing how to access PowerSmart programs.

2. BUILD AND REINVEST MORE

A participant expressed their support for whatever decision Treaty 8 First Nations make around Site C.

Vancouver Workshop

July 12, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

There was interest in other Resource Smart options that might be available under this set of recommended actions.

There was a view that Site C and the transmission upgrades were fully committed projects, even though participants were being told that the Integrated Resource Plan did not commit BC Hydro to any specific capital project.

There was a perception that the liquefied natural gas (LNG) industry had caught BC Hydro with its pants down.

3. BUY MORE MADE-IN-BC POWER

There were no questions or comments on this recommended action.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

It was noted that there is a high level of uncertainty that the plan was trying to address, and that the plan was vulnerable to changes in government policy. One participant indicated that it is difficult to comment on this section when there is so much uncertainty.

A participant indicated that their community was in discussions with BC Hydro about developing resources on the North Coast, and drew a parallel with Site C. The participant felt that just as their community would want to support the First Nations in the Site C project area that are opposing Site C, their community would be looking for support from First Nations in other parts of the province to support its plans to develop clean energy on the North Coast. It was suggested that the recommended actions related to the North Coast meant that much of the resources to support liquefied natural gas (LNG) would come from independent power producers; however, there was concern that new independent power production is still tenuous as it seemed it would only be needed to serve LNG development. From the participant's perspective, their community was talking about developing clean energy resources for the province in general, as part of the province-wide supply options for BC Hydro, not just for LNG.

There was significant concern, and even alarm, expressed about a perceived lack of opportunities for First Nations in the recommended actions, and a view that the Draft Integrated Resource Plan did not address First Nations interests in participating in clean energy development. Helping First Nations involvement in clean energy development needs to be built into the recommended actions or it will be forgotten. It was noted that providing opportunities for First Nations was mandated by the *Clean Energy Act*. There was also the view that BC Hydro and First Nations should look at a "new relationship" way of acquiring power.

There was a perceived lack of commitment to sustainability in the Integrated Resource Plan, and questions about where sustainability is being addressed if not in the Integrated Resource Plan. It was suggested that to meet sustainability goals, BC Hydro should use forward thinking to move beyond only proven technologies, and consider more alternative forms of energy production. It was also suggested that the Integrated Resource Plan should involve supplying all First Nations with clean energy.

With regard to natural gas, there was a concern with planning for the use of anything other than clean sources of energy. Fracking was considered a big environmental issue. One participant said that using gas to export gas seemed ridiculous.

There was considerable interest in pumped storage, and participants sought specific information on how the technology worked, how proven the technology was, and the preferred locations for the siting of the technology in

Integrated Resource Plan Appendix 7G

the province. There was also interest in how many facilities may be required to fill the projected peak capacity gap, and what the total footprint of those facilities might be. One participant expressed the view that pumped storage seemed high cost with a low return. Another participant suggested BC Hydro work with First Nations to establish pumped storage as a new First Nations industry.

There was a concern that the Integrated Resource Plan was being described as a high-level, 20-year plan, but was very focused on specific projects like Site C, Revelstoke 6, and 500 kV transmission lines. A participant felt that BC Hydro was not characterizing correctly the projects included in the plan, and that this could affect the ability of First Nations to respond appropriately when providing their feedback.

With specific reference to Site C's inclusion in the Draft Integrated Resource Plan, a participant was interested in knowing what contingencies BC Hydro had in place should the Site C project not proceed.

BC FIRST NATIONS ENERGY AND MINING COUNCIL (FNEMC)

The FNEMC representative explained the FNEMC's role in developing the Integrated Resource Plan. It was also explained that the FNEMC has an agreement to help develop relationships with BC Hydro, and that the FNEMC was attending the workshops to support First Nations that could not attend. The participants were advised that the FNEMC will be producing two reports, one based on their participation in the workshops, and another based on their participation on the Technical Advisory Committee.

REQUESTS

There were no specific requests made by the participants.

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

A participant indicated that they had a sense of what energy needs would be going forward based on the Draft Integrated Resource Plan; however, they noted that each project has its own set of negotiations and that the plan might not work in their territory as compared with another First Nation's territory. The suggestion was that this was not consultation.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Integrated Resource Plan Appendix 7G
BC Hydro Integrated Resource Plan:
First Nation Consultation

Abbotsford – July 13, 2012
Ramada Inn

First Nation / Organization Attendees	
Daniel Kelly	Yakwekwioose Band
Joanna Prince	FIRST NATIONS ENERGY AND MINING COUNCIL
Kelly Brown	Heiltsuk First Nation
Mike Watson	Yakwekwioose Band
Stephen Jimmie	IN-SHUCK-CH NATION
Terry Raymond	Boston Bar First Nation
Frances Brown	Heiltsuk First Nation
Carrie Victor	STO:LO TRIBAL COUNCIL
Chief Angie Bailey	Aitchelitz Band
Chief Rita Matthew	Simpcw First Nation
Chief Rhoda Peters	Chawathil
Leona Sam, Councillor	Aitchelitz Band
Mike Kelly	Leq:amel First Nation
Melanie Williams	Tzeachten First Nation
BC Hydro Representatives	
Charlie Weiler	Aboriginal Relations
John Rich	Energy Planning
Loretta James	Aboriginal Relations
Donia Snow	Aboriginal Relations
Neutral Facilitator	
Dan George, Four Directions Management Services	Neutral Facilitator

WELCOME AND INTRODUCTORY REMARKS

The workshop began with Dan George acknowledging the traditional territory and welcoming everyone to the meeting. Dan spoke to the steps taken to date in developing the Draft Integrated Resource Plan, the purpose of today's session, and the agenda items, as follows:

- *Development of the Draft Integrated Resource Plan, including what an Integrated Resource Plan is and review of input received from First Nations;*
- *Review the Draft Integrated Resource Plan;*
- *Seek feedback on the Recommended Actions in the Draft Integrated Resource Plan; and,*
- *Next Steps before the Integrated Resource Plan is submitted to Government for approval.*

Included in the printed material provided to participants was:

- *BC Hydro's slide presentation for the Abbotsford regional workshop;*
- *The Discussion Guide for the Draft Integrated Resource Plan;*

Abbotsford Workshop
July 13, 2012

Integrated Resource Plan Appendix 7G

- *The Executive Summary of First Nations input from the last round of regional workshops and public/stakeholder input;*
- *The summaries of input from the previous First Nation regional workshop in Abbotsford;*
- *A First Nations written feedback form; and,*
- *A brochure with information on BC Hydro's aboriginal initiatives.*

There was a view that the province-wide approach of the Integrated Resource Plan does not address First Nations issues and objectives, in particular past grievances, revenue sharing, and opportunities for First Nations to participate in energy development.

It was viewed as a problem that the Integrated Resource Plan did not proceed from a First Nations territory perspective. One participant said that their community (which was currently not connected to BC Hydro's integrated transmission system) was doing their own energy planning. The participant said that BC Hydro is not recognizing their plan and the Integrated Resource Plan could clash with their plan. In this sense, the Integrated Resource Plan was described as a wall to get over for First Nations, even if it is only half a wall. The participant said that they are constantly climbing over walls to get anything done. On the other hand, another participant questioned what was meant by territorial-level planning, as there would be First Nations that do not have a word for ownership in their language. The participant expressed that there were formerly no First Nations territories; that First Nations went everywhere. There was a perception that First Nations were being arbitrarily broken down into groups by BC Hydro.

There was a concern that the Draft Integrated Resource Plan did not address past grievances and revenue sharing. A participant indicated that, from a First Nations perspective, transmission is the most contentious issue for First Nations, as existing lines pass through their territories throughout the province, and that much of this was done without consultation. Another participant said that they cannot get their community to pay attention to the Integrated Resource Plan because past grievances have not been addressed. It was noted that BC Hydro mostly responds to questions about past grievances by saying that these need to be discussed with government, not BC Hydro; however, there was a view that BC Hydro is wholly owned by the government, and that it should be able to negotiate these issues. With regard to revenue sharing, a participant suggested that a mandate to revenue share would get BC Hydro to the river's edge in the systems thinking approach described in BC Hydro's presentation. One participant used the analogy of an octopus to describe how BC Hydro is one arm of government – of the octopus – and that the various tentacles of the octopus often do not know what the octopus is doing.

Participants expressed the view that this was not consultation, but only information sharing. One participant said that their community may one day be on the grid, maybe not in the participant's lifetime, but for their great-grandchildren they had to take care of these things now. It was therefore important for First Nations to be part of the planning process from the start and in putting the plan together. There was a view that the regional workshops were not sufficient. A participant suggested that if BC Hydro wanted to be successful in its planning, it would have to work with First Nations. Another participant said that the Integrated Resource Plan seemed so integral to BC Hydro, and yet First Nations were not being consulted and did not have input. The participant suggested that BC Hydro was creating a situation that would repeatedly pit BC Hydro against First Nations. It was felt that BC Hydro would face opposition when it comes to referrals, and that it will take BC Hydro a lot more time. A participant said that this would make First Nations look bad for stopping development, but they do not want to stop development. Rather, they want to be involved in the planning, and the Integrated Resource Plan should provide for fair opportunities for First Nations to participate in new energy projects. It was viewed as unacceptable for BC Hydro to tell First Nations what it will be doing and to just move forward. It was also suggested that the Integrated Resource Plan address this potential resistance and plan for it.

Abbotsford Workshop

July 13, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

A participant suggested that dedicated First Nations strategic planning sessions involving First Nations leaders were needed to pursue planning and development of energy with First Nations objectives in mind, and that the outcomes could then be filtered down to individual First Nations. Otherwise, First Nations would have to live with whatever BC Hydro develops. One participant expressed the view that the wider First Nations community was quite fragmented by individual First Nations going ahead with their own plans, and found it helpful to hear during the session what other First Nations were doing about energy planning in their communities.

The participant felt that First Nations do not know what is going on with developments until someone drives in and just does it. While it was acknowledged that First Nations have a need for electricity, there was a challenge identified in having the ability to be part of what was seen as a moving target. There was an interest in knowing who they had to meet with to influence BC Hydro.

DEVELOPMENT OF THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation covered what an Integrated Resource Plan is and contains, why one is needed, and the process to date in developing the Draft Integrated Resource Plan, including a review of the input received from First Nations in 2011.

There was interest in knowing more about the shift in government policy to exempt natural gas from clean or renewable energy targets under the *Clean Energy Act* when natural gas is used by the liquefied natural gas (LNG) industry, but not when it is used for other purposes. A participant said that a few years ago, the provincial government was opposed to the United States building gas plants just across the boarder, but now the government seems to be saying it is acceptable to have gas emissions from these plants. There was also a comment that fracking was not considered sustainable or renewable.

There was a view that the Integrated Resource Plan should consider carbon emissions. There was also a view that renewable energy should be looked at as a source of heating.

THE DRAFT INTEGRATED RESOURCE PLAN

This aspect of BC Hydro's presentation described the dynamic planning context, the updated long term forecast demand for electricity, and the anticipated gap between forecast demand and current electricity supply.

There were no questions or comments from participants on this part of the presentation.

DRAFT RECOMMENDED ACTIONS

This aspect of BC Hydro's presentation covered the 14 actions that BC Hydro is recommending to close the anticipated gap between demand and supply, and the considerations that BC Hydro took into account in developing these recommended actions, which were grouped into four broad categories: (1) Conserve More; (2) Build and Reinvest More in Existing Assets; (3) Buy More; and (4) Prepare for Potentially Greater Demand.

1. CONSERVE MORE

There was interest in PowerSmart programs and in learning more about how to monitor and modify one's own electricity consumption.

Abbotsford Workshop

July 13, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

2. BUILD AND REINVEST MORE

There was an observation that input from the 2011 round of workshops indicated that other groups were willing to support the opposition to Site C by local First Nations.

There was a perception that First Nations were making agreements on projects without seeing the effects of those projects on other First Nations, and that the latter are only informed once the development has already happened. By then, any benefits from the development are gone. The participant felt that benefits around jobs are coming from BC Hydro and private companies, but not from government.

There was interest in the Columbia Treaty Entitlement. A participant said that while they understood BC Hydro needed to have a back up for the peak capacity gap, they believed using the treaty entitlement was exposing BC Hydro to potentially higher global market prices. There was a suggestion that BC Hydro hold regional or local sessions to talk about the treaty entitlement. This was tied to the view that the effects of the treaty entitlement on the southeast part of the province were huge and that whole villages had disappeared, but First Nations in that region had received no benefits. The participant was aware that BC Hydro and the government were again negotiating on the entitlement, but in the participant's view First Nations were once again not being brought in during the planning or before decisions were made. There was a concern that the treatment of the entitlement was only forward looking and was not addressing the historical impacts. Another participant questioned the reliance on the entitlement when the United States was decommissioning dams on the Columbia River.

It was expressed that silence in response to BC Hydro's request for feedback on the recommended actions should not be understood as approval. The participant felt that there was so much to consider, and that it would be hard to give feedback immediately.

3. BUY MORE MADE-IN-BC POWER

There was considerable interest in First Nations involvement in independent power production and BC Hydro's procurement process. One participant was interested in government programs to assist First Nations participation in renewable energy. An interest in revenue sharing was again expressed, along with the view that BC Hydro, rather than government, could enter into revenue sharing with First Nations.

A participant indicated that they were working with BC Hydro toward establishing a process or agreement whereby First Nations would have the right of first refusal on work that they had existing capacity to take on. The participant acknowledged that BC Hydro has been pretty good at providing opportunities, and that the participant's community has accepted direct awards from BC Hydro. The participant was interested in BC Hydro taking a similar approach to the developments arising from the Integrated Resource Plan.

One participant said that First Nations need to see more renewable energy contracts. While First Nations are coming up with their own land use plans, there was a gold rush on energy in the participant's area. It was understood that there would be referrals coming in to many First Nations in relation to independent power projects, and the participant was concerned about how First Nations were going to deal with these referrals and developers. There was a view that, while someone would be making money off of this development, First Nations would be left out, yet they would be paying for the development in terms of lost land. The participant said that they wanted First Nations to make the money on these projects. They wanted BC Hydro to sit down and talk with them about how many projects are planned in their territories and what accommodation for these projects will look like.

Integrated Resource Plan Appendix 7G

The participant was concerned that the Integrated Resource Plan is very high level, and that by the time First Nations interests are considered, the plans have been made and First Nations have no input. There was concern expressed about independent power producers trying to come into First Nations territories under the radar, without consulting. It was stated that companies are coming in regularly through the referrals process, and that First Nations have a big concern with the environmental footprint.

The participant said that their First Nation was looking at joint ventures with companies, as they did not have the capacity to take on energy development projects themselves, an approach another participant said their First Nation had taken. They were also looking at forming an energy group so that they can have a say in the planning process, in particular where projects will be put; however, there were so many factors that come into play and capacity is needed.

4. PREPARE FOR POTENTIALLY GREATER DEMAND

Participants expressed concern about the timeline for responding to the Draft Integrated Resource Plan. One participant asked BC Hydro to be patient with First Nations; there were so many things coming at them that they had to think about, and unlike BC Hydro they did not have people whose job it was to think about these plans. Another participant said that BC Hydro is asking people to think really quickly about what might affect them in the future. The effects from the implementation of liquefied natural gas (LNG) are tough to consider now, but silence from First Nations does not mean “yes.” The participant said that LNG and Enbridge are happening at the same time, and that perhaps there had been hope that everyone would pay attention to LNG and not Enbridge, but that has not happened.

There was a perception that the Integrated Resource Plan would affect First Nations unilaterally. There was also a comment that First Nations have their own environmental laws.

The Simpcw First Nation said they wanted to be on record as stating that they recognized and respected First Nations jurisdictions and supported the concerns of those First Nations whose traditional territories may be directly impacted.

There was interest in knowing whether pumped storage could be located anywhere in the province, and what locations were under consideration.

There was concern about the health effects of emissions from natural gas plants and it was noted that the natural gas plant proposed across the border in the United States was rejected in part due to health concerns. It was suggested that increased health costs associated with natural gas plants could be more than the savings associated with these plants.

BC FIRST NATIONS ENERGY AND MINING COUNCIL (FNEMC)

The FNEMC representative explained that the board of the FNEMC was appointed by the Assembly of First Nations (BC Region), Union of BC Indian Chiefs, and First Nations Summit. The First Nations Energy and Mining Council (FNEMC) representative explained that the role of the FNEMC in the development of the Integrated Resource Plan, and that this role was guided by a Memorandum of Understanding with BC Hydro that included provision for the FNEMC's

Abbotsford Workshop

July 13, 2012

This summary of First Nation feedback is not intended to be a verbatim transcript of the workshop

Integrated Resource Plan Appendix 7G

participation in the workshops and in the Technical Advisory Committee. The participants were advised that the FNEMC would be putting its report on the Draft Integrated Resource Plan on its website.

REQUESTS

Provide one of the participants with hardcopies of the Discussion Guide.

Provide more information on BC Hydro's procurement process for independent power projects.

NEXT STEPS/CLOSING

Dan George outlined next steps before the Integrated Resource Plan is submitted to Government for approval. These included BC Hydro providing a written summary of feedback to First Nations workshop participants two weeks following each workshop, and the additional opportunity for First Nations to provide written comments by e-mail or fax by August 13, 2012.

At the end of the session, Charlie Weiler explained that BC Hydro would like to understand how First Nations would like to be engaged on BC Hydro's 5-10 year outlook of activities. BC Hydro requested written feedback from the participants on this.

Dan George and Charlie Weiler thanked the participants for attending the workshop and for providing their feedback and perspectives.

Note: The written comments received at the workshops will be summarized into a single non-attributed document and sent out to participants following the conclusion of all of the regional workshops.

Appendix 13 — Distribution Letters for Workshop Summaries



Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

April 8, 2011

Participant Name
First Nation/Organization
Street
City, Prov, Postal

Sent by email & cc fax

Re: Summary Notes from BC Hydro's Integrated Resource Plan First Nation Workshop in Nanaimo

Dear Participant Name,

Thank you for attending the workshop on BC Hydro's Integrated Resource Plan.

Please find attached BC Hydro's summary of participant comments from the workshop. I would appreciate receiving any comments that you may have on the attached summary.

In addition, as discussed at the workshop, should you have any further comments you wish to provide to BC Hydro on the components of the Integrated Resource Plan that were presented and discussed at the workshop, an electronic copy of the First Nations Input Form provided at the workshop is attached to this email.

I would request that you provide your comments on the notes and/or the components of the Integrated Resource Plan via e-mail to 2011IRP@bchydro.com by April 30, 2011. Please note that the summary notes and all comments received on the notes will be posted in May on BC Hydro's website at: www.bchydro.com/irp

BC Hydro will be considering the input received from First Nations in the development of the draft Integrated Resource Plan. In addition we will be following up on questions and requests for additional information. Should you have any questions please do not hesitate to contact us. We look forward to receiving any further input you may have.

Sincerely,



Charlie Weiler
Integrated Resource Plan First Nation Consultation Project Manager

cc. Chief Allan Claxton, Tsawout First Nation. Fax: 250.652.9114



Sheila Reynolds
Manager, Corporate Relations & Regulatory
BC Hydro Aboriginal Relations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

July 26, 2012

«Participant»

«Name»

«Street»

«City» «PC»

Sent by email & cc fax

Re: Summary Notes from the «WSCity» First Nations workshop on BC Hydro's Draft Integrated Resource Plan

Dear «Participant»,

Thank you for attending the workshop on BC Hydro's Draft Integrated Resource Plan.

Please find attached BC Hydro's summary of participant comments from the workshop. We would appreciate receiving any comments that you may have on the attached summary. In addition, as discussed at the workshop, should you have any further comments you wish to provide to BC Hydro on the components of the draft Integrated Resource Plan that were presented and discussed at the workshop, an electronic copy of the First Nations Feedback Form provided at the workshop is attached to this email.

I would request that you provide your comments on the notes and/or the Draft Integrated Resource Plan via e-mail to 2012irp@bchydro.com by August 13, 2012.

BC Hydro will be considering the feedback received from First Nations in completion of the final Integrated Resource Plan. We will also be following up on questions and requests for additional information. Should you have any questions please do not hesitate to contact us. We look forward to receiving any further feedback you may have.

Sincerely,

Sheila Reynolds
Manager, Corporate Relations & Regulatory
BC Hydro Aboriginal Relations

cc. «Chief»

Fax: «Fax»

Appendix 14 — Workshop Follow-up Letters



Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

March 24, 2011

Participant Name
First Nation / Organization
Sent by email:

Re: BC Hydro's Integrated Resource Plan

Dear Participant Name

Thank you for participating in the Integrated Resource Plan workshop we held in Ft. St. John. We appreciate you taking the time to learn about BC Hydro's integrated resource planning process and to share your perspective on the future of clean and renewable energy development in the province.

If you have still need to complete the First Nations Input Form provided at the workshop, we encourage you to complete the attached PDF Input Form or send us a letter with any further comments by April 30, 2011 to the address above.

Again, thank you for taking the time to participate in the workshop. We look forward to meeting with you again in the fall.

Sincerely,



Charlie Weiler



Sheila Reynolds
Manager, Corporate Relations & Regulatory
BC Hydro Aboriginal Relations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

July 17, 2012

«Participant»
«Name»
«Street»
«WSCity» «PC»

Sent by email: «Email»

Re: BC Hydro's Integrated Resource Plan

Dear «Participant»,

Thank you for participating in the Integrated Resource Plan workshop we held in «WSCity».

We appreciate you taking the time to hear about BC Hydro's Draft Integrated Resource Plan and providing us your feedback and perspective on the future of clean and renewable energy development in the province.

If you have still need to complete the First Nations Feedback Form provided at the workshop, we encourage you to complete the attached PDF Form or send us a letter with any further comments by August 13, 2012 to the address above or by email to 2012irp@bchydro.com

If you have not yet done so, please complete the Travel Expense Claim form and return it to us, along with your hotel receipts, so we can reimburse you for these costs.

Again, thank you for taking the time to participate in the workshop.

Sincerely,



Sheila Reynolds
Manager, Corporate Relations & Regulatory
BC Hydro Aboriginal Relations

**Appendix 15 — B.C. First Nations Energy and Mining Council
Capacity Funding Agreement**

CAPACITY FUNDING AGREEMENT

THIS AGREEMENT dated as of the 3rd day of March, 2010. ~~2011~~ ^{L.V.}

BETWEEN:

The BC First Nations Energy and Mining Council, a society incorporated under the *Society Act*, R.S.B.C. 1996, c. 433, as amended, for and on behalf of itself, the First Nations Leadership Council, and its members organizations.

(The "BCFNEMC")

AND:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, a corporation continued under the authority of the *Hydro and Power Authority Act*, R.S.B.C. 1996, c. 212, as amended.

("BC Hydro")

WHEREAS:

- A. Pursuant to section 3 of the *Clean Energy Act*, BC Hydro is developing an integrated resource plan (IRP) that will be submitted to the Provincial government in December 2011 for its review and approval. BC Hydro is undertaking a consultation with First Nations on the development of the IRP and will be submitting to government a consultation report in respect of the development of the IRP.
- B. The BCFNEMC was created by the First Nations in BC as a result of the 2007 First Nations Energy Action Plan and the 2009 First Nations Mineral Exploration and Mining Action Plan. The Chiefs-in-Assembly, through resolutions of the BCAFN, FNS and UBCIC have established Councils to address a range of sectoral issues. These Councils are accountable to, and receive direction from, the First Nations Leadership Council (FNLC) and the First Nations in BC.
- C. The First Nations Leadership Council membership consists of the political executives of the BC Assembly of First Nations, First Nations Summit, and the Union of BC Indian Chiefs, as representatives of their respective organizations. The First Nations Leadership Council works together to represent the political interests of First Nations in British Columbia. The FNLC meets with the BCFNEMC regularly to identify priority issues for First Nations to address collectively. An important role of the BCFNEMC is to monitor and keep the FNLC and First Nations informed of emerging issues as well as to conduct research, analysis and options on energy and mining issues.

- D. BC Hydro plans to consult with First Nations on its Integrated Resource Plan.
- E. BC Hydro invited the BCFNEMC to participate in the consultation with First Nations on BC Hydro's IRP.

NOW THEREFORE the Parties agree as follows:

1 DEFINITIONS

"Agreement" means this Agreement, including any appendices attached hereto;

"First Nation Community" means each Indian Band within the meaning of the *Indian Act*, R.S.C. 1985, c. I-5, as amended whose band office is located within the borders of the province of British Columbia, and "First Nations Communities" means all such bands;

"Aboriginal Title and Rights" means the aboriginal rights, including aboriginal title, individually or collectively asserted by the First Nations Communities;

"Consultation Process" means the process of consultation undertaken by BC Hydro in respect of BC Hydro's development of the IRP that BC Hydro will be submitting to government in November 2011 for government review and approval.

"Funding" means the funds paid by BC Hydro to the BCFNEMC in accordance with section 3;

"Integrated Resource Plan or "IRP" means, the plan that BC Hydro is developing to meet its customers' anticipated future electricity needs.

"Parties" means BC Hydro and the BCFNEMC, and their respective successors and assigns, and "Party" means either one of the Parties;

"Technical Advisory Committee" means the committee of stakeholder and First Nations representatives that will assist BC Hydro in creating a thorough and well considered IRP for submission to the government in November 2011 by providing ongoing input and feedback into the development of the IRP.

2 PURPOSE

- 2.1 The Parties agree that the purpose of this Agreement, and the provision of the Funding by BC Hydro to the BCFNEMC, is to enable the BCFNEMC to participate in the Consultation Process and act as a resource for First Nations

Communities who are also participating in the Consultation Process, including but not necessarily limited to:

- a. Attend, prepare and participate in all of BC Hydro's First Nations only regional workshops related to consultation on the IRP from the date of this Agreement until the conclusion of the Consultation Process.
- b. Attend, prepare and participate in all of the Technical Advisory Committee meetings throughout the development of the IRP.
- c. Undertake and provide a report(s) in connection with the development of the IRP in accordance with the deliverables and timelines identified in Appendix A and B;
- d. Act as a resource to First Nations Communities participating in the Consultation Process by providing their First Nations leadership with information about the development of the IRP and the involvement of the BCFNEMC in the Consultation Process.

3 CAPACITY FUNDING

- 3.1 BC Hydro will provide the Funding to the BCFNEMC to assist the BCFNEMC to implement this Agreement and to participate in the Consultation Process in accordance with the amounts and conditions of payment of the Funding as set out in Appendices A and B.

4 TIMELINES AND TERMINATION

- 4.1 This Agreement will remain in force until November 30, 2011 when the IRP is to be submitted to Government for its review and approval, unless the Parties agree in writing to extend the term of this Agreement.
- 4.2 Either Party may terminate this Agreement with 30 days written notice to the other Party.
- 4.3 If either Party terminates this Agreement, BC Hydro will provide the Funding for any costs or amounts incurred by the BCFNEMC and owing under this Agreement as of the date that written notice to terminate this Agreement is given.
- 4.4 Unless otherwise agreed to in writing by BC Hydro, BC Hydro shall have no further obligation to provide the Funding to the BCFNEMC after the termination of this Agreement.

5 EXISTING RIGHTS AND OBLIGATIONS OF THE PARTIES

- 5.1 Nothing in this Agreement creates any legal partnership, co-venture, or principal and agent relationship between the Parties.

5.2 Nothing in this Agreement shall be construed as an expressed or implied acceptance by BC Hydro or of the Province of British Columbia of any Aboriginal Title and Rights.

6 REPRESENTATIONS AND WARRANTIES

6.1 The BCFNEMC represents and warrants to BC Hydro that:

- a. It has the full authority and mandate to enter this Agreement, receive payments and fulfill the obligations under this Agreement on behalf of the First Nations Leadership Council and the First Nations Leadership Council member organizations; and
- b. The execution and delivery of this Agreement and the completion of the transactions contemplated herein have been duly authorised by all requisite action on the part of the BCFNEMC.

6.2 Each Party represents and warrants to the other that it has retained and received independent legal advice regarding this Agreement.

6.3 The Parties agree that the rule of construction that ambiguities are to be resolved against drafting parties does not apply to the interpretation of this Agreement, and that there will be no presumption that any doubtful or ambiguous expression is to be resolved in favour of either Party.

7 GENERAL

7.1 Any notice, direction, payment or any or all material that either Party may be required or desired to give or deliver to the other Party shall be in writing and shall be given by personal delivery, by e-mail, by facsimile, by mailing or by courier, in each case addressed to the intended recipient as follows:

to BC First Nations Energy and Mining Council (BCFNEMC)
Attention: Dave Porter
Chief Executive Officer
#618 - 100 Park Royal South
West Vancouver, BC
V7T 1A2

to BC Hydro
Attention: Shella Reynolds
Manager, Aboriginal & Corporate Relations)
10th floor - 6911 Southpoint Drive
Burnaby, BC
V3N 4X8
Fax: 604-528-2822

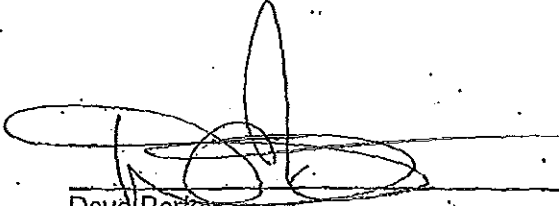
Or such address or addresses as a Party may, from time to time, designate in writing.

- 7.2 In the case of any dispute or disagreement regarding this Agreement, the Parties agree that their designated representatives will first try to resolve such dispute or disagreement. If a dispute or disagreement cannot be resolved by the respective Parties' representatives, the Parties agree that the Manager, Aboriginal & Corporate Relations for BC Hydro and the CEO of the BCFNEMC will meet to discuss such dispute or disagreement and attempt to resolve it in a timely manner.
- 7.3 Neither party may assign any right, benefit, or interest in or under this Agreement without the written consent of the other party.
- 7.4 No provision of this Agreement or breach thereof will be deemed to have been waived by a Party unless such waiver has been made in writing.
- 7.5 Any amendments to this Agreement must be in writing and executed by the Parties.
- 7.6 The headings in this Agreement have been added for ease of reference and in no way define the scope of any provision of this Agreement.
- 7.7 Time shall be of the essence in this Agreement and no variation of this Agreement shall operate as a waiver of this provision.
- 7.8 This Agreement contains the whole agreement between the Parties with respect to the matters herein, and there are no express or implied representations, warranties, terms, conditions other than as expressly set forth or referred to in this Agreement.
- 7.9 If any provision of this Agreement is found to be invalid or unenforceable, it shall be severed from this Agreement to the extent of its invalidity or unenforceability, without affecting the remainder of the Agreement.
- 7.10 If any part of this Agreement is declared or held invalid or unenforceable by a court of competent jurisdiction, the Parties agree to negotiate and attempt to reach agreement on a replacement for the part declared or held invalid with a view to achieving the intent of the Parties as expressed in this Agreement.
- 7.11 This Agreement shall be construed in accordance with the laws of Canada and the laws of the Province of British Columbia, as applicable.

IN WITNESS WHEREOF the Parties hereto have executed this Agreement as of the day and year first above written.

SIGNED on behalf of the BCFNEMC
by the authorized representative of the BCFNEMC:

Per:



Dave Porter
Chief Executive Officer
BC First Nations Energy and Mining Council

SIGNED on behalf of the
BRITISH COLUMBIA HYDRO AND POWER AUTHORITY:

Per:



Lyle Viereck
Director, Aboriginal Relations & Negotiations
BC Hydro

APPENDIX A - Approved Budget

BC Hydro will provide funding for the deliverables below, subject to the Payment Schedule and Conditions outlined in Appendix B.

Task	Deliverable	Approved Budget
Development of Capacity Funding Agreement	<ul style="list-style-type: none"> BCFNEMC will work with BC Hydro to develop a capacity funding agreement to support the BCFNEMC's involvement in the Technical Advisory Committee on BC Hydro's IRP and the BCFNEMC's participation in BC Hydro's consultation with First Nations on the IRP. 	Based on rates set out in Appendix B; estimated expenditures \$5,000.00
Participation in BC Hydro Integrated Resource Plan Technical Advisory Committee (TAC), associated research and briefings with First Nations	<ul style="list-style-type: none"> BCFNEMC will provide a First Nations perspective at the TAC meetings by having a technical energy representative attend and participate in all TAC meetings on behalf of the BCFNEMC. The technical representative retained by the BCFNEMC will receive instructions directly from the BCFNEMC CEO and brief the CEO on the full discussions that occurred at the TAC meetings. The technical representative retained by the BCFNEMC will act as a resource for the CEO, BCFNEMC in explaining the technical information presented by BC Hydro at the TAC meetings and the technical discussions that occurred during the TAC meetings. 	<p>Based on rates set out in Appendix B; estimated expenditures \$34,000.00</p> <p>The budget for this category includes estimated travel expenses.</p>
Participation at Regional Workshops	<ul style="list-style-type: none"> A BCFNEMC representative, with the authority to speak on behalf of the CEO, BCFNEMC will attend and participate in all BC Hydro regional workshops with First Nations on the IRP. The BCFNEMC's representative will review all materials prior to each workshop and review materials arising from the workshops as they are provided by BC Hydro and posted on BC Hydro's IRP website. 	<p>Based on rates set out in Appendix B - Blended Rate; estimated expenditures \$52,000.00</p> <p>The budget for this category includes estimated travel expenses.</p>
Communications with First Nations and Tribal Councils	<ul style="list-style-type: none"> Act as a resource to First Nations Communities by providing First Nations leadership with information about the development of the IRP and the involvement of the BCFNEMC in BC Hydro's consultation process on the IRP. Keep the member organizations of the First Nations Leadership Council, and if requested, a First Nations Community, informed of the activities, information developed, and technical and policy decisions of the BCFNEMC as they relate to BC Hydro's consultation process on the IRP. 	Based on rates set out in Appendix B; estimated expenditures \$20,000.00

<p>Report(s) relating to the development of the IRP</p>	<ul style="list-style-type: none"> • Prepare one or more written reports, as determined by the BCFNEMC to be appropriate, relating to the development of the IRP and provide it to BC Hydro. • Provide all First Nations Communities with written notice of any report completed by or on behalf of the BCFNEMC in connection with the development of the IRP and provide a copy of it to all First Nations Communities who request it. • Provide BC Hydro with a copy of all reports developed, under this capacity funding agreement, by the BCFNEMC as they relate to the development of BC Hydro's IRP. Any written reports shall be completed and provided to BC Hydro no later than October 31, 2011. 	<p>Based on rates set out in Appendix B; estimated expenditures \$15,000.00</p>
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**APPENDIX B
Payment Schedule and Conditions**

1. The Funding paid out under this Capacity Funding Agreement shall not exceed \$136,000.00 (which includes the \$5,000.00 already been paid out to the BCFNEMC in September 2010). The Capacity Funding Agreement does not include the participant and travel funding paid out by BC Hydro to the BCFNEMC for the BCFNEMC involvement in the BC Hydro workshops held on September 14, 2010 (Resource Options) and September 24, 2010 (Consultation Design).
2. **Payment Schedule:** Subject to meeting the conditions set out herein, BC Hydro will provide the BCFNEMC with advances for the costs set out in Schedule A in the following installments:

Time	Amount	Cumulative
Already paid	\$ 5,000.00*	\$ 5,000.00
Date of Signing	\$ 15,000.00**	\$ 20,000.00
10 Days Later	\$ 40,000.00	\$ 60,000.00
10 days after publication of the IRP (estimated to be August 2011)	\$ 40,000.00	\$ 100,000.00
December 31, 2011	\$ 10,000.00	\$ 110,000.00 (Does not include travel expenses.)

**This amount was paid by BC Hydro to the BCFNEMC prior to entering into this Agreement and is included in the total amount being paid to the BCFNEMC under this Agreement*

***This amount includes a \$10,000.00 contribution to the BCFNEMC for its costs outlined in the BCFNEMC IRP Financial Report ("Report") dated September - February 2011 received by BC Hydro on February 21, 2011. This payment represents full and final payment for the costs outlined in this Report.*

3. **Accounting:** BCFNEMC shall provide BC Hydro with an itemized accounting of expenditures incurred by BCFNEMC in connection with the funds paid to the BCFNEMC in the previous installment. Such reports will be due and submitted on May 31, 2011 and November 31, 2011. *h.v*

- **Rates:** BC Hydro will pay BCFNEMC's costs associated with their participation in the activities set out in the capacity funding agreement at the following rates:

- CEO, BCFNEMC - \$1200.00/day (based on an 8 hour day)
- BCFNEMC Technical Consultants - \$800.00/day (based on a maximum of an 8 hour day and their standard professional charge-out rate)
- BCFNEMC Staff - Up to a maximum of \$600.00/day (based on an 8 hour day).

- o Blended Rate – \$1200.00/day. This Blended Rate is applicable to the activities outlined in "Participation at Regional Workshops" in Appendix A. The purpose of this Blended Rate is to accommodate the cross-section of BCFNEMC staff and consultants that will be involved in this activity.

4. **Travel Funding for Eligible Travel Expenses:** In addition to the payments set out in the Payment Schedule in section 2, BC Hydro will reimburse eligible travel expenses up to a maximum of \$26,000.00 upon receipt of a Travel Expense Claim Form (which BC Hydro will provide). Included in eligible travel expenses are taxi fares provided there is a dated receipt and an explanation for the expense submitted with the Travel Expense Claim Form.

Breakfast per diem	\$11.00
Lunch per diem	\$14.00
Dinner per diem	\$26.00
Breakfast, Lunch and Dinner	\$51.00
Mileage - Applicable for travel of 25 km or more.	\$0.62 per kilometer
Hotel Accommodation - Applicable when travelling more than 50 km and subject to providing a receipt BC Hydro expects that the funding offer of \$125.00 for accommodations will be sufficient for rates outside of Vancouver. However, it is noted that the FNEMC may need to book their consultants into hotels within Vancouver where higher rates apply and has therefore increased this amount to "up to" \$200.00	Up to \$200.00
Airfare - Airfare reimbursements require a receipt and boarding pass with expense claim.	Full cost of an economy class ticket
Entering this agreement is sufficient for pre-approval of airfare pursuant to these conditions which we have added.	

5. Prior to the payment of each installment of the Funding, BC Hydro will assess whether the terms and conditions of this Agreement have been met. Should the terms and conditions of the Agreement not be met BC Hydro may withhold further Funding until such terms have been satisfied.

**Appendix 16 — B.C. First Nations Energy and Mining Council
Workshop Reports**

BC First Nations Energy and Mining Council
#618- 100 Park Royal South
West Vancouver, BC
V7T 1A2
Telephone: 604 921 2014
Fax: 604 921 4401



March 12, 2011

BC Hydro
6911 Southpoint Drive. 10th Floor
Burnaby, BC
V3N 4X8

Att: Charlie Weiler, Integrated Resource Plan First Nation Consultation Project Manager

RE: Integrated Resource Plan Workshops March 2011

Dear Mr. Weiler,

First Nation Energy & Mining Council is submitting two reports to BC Hydro regarding the Integrated Resource Plan:

1. Technical Advisory Committee submission
2. Regional First Nations Workshops submission

These reports have concurrently been sent to the BC First Nations, Union of BC Indian Chiefs, First Nations Summit and the BC Assembly of First Nations.

For further information, or discussion please contact Joanna Prince at (604) 921-2014.

Sincerely,

A handwritten signature in black ink, appearing to be 'Dave Porter'. The signature is stylized and somewhat abstract, with a large loop at the beginning and several smaller loops and strokes following.

Dave Porter

cc. Bev VanRuyven
Lyle Viereck

TABLE OF CONTENTS

Introduction _____ **3-4**

Conservation and Efficiency _____ **4**

Issue Summary _____ 4

Key Comments and Recommendations _____ 5

Remote Community Electricification.a _____ 5

Program Design and First Nation Access.b _____ 5

Housing. c _____ 5

Coordination with other Government Goals and Objectives.d _____ 5

Generation Options _____ **5**

Issue Summary _____ 5-6

Key Comments and Recommendations _____ 6

Portfolios. a _____ 6

Assessment Criteria and Process.b _____ 6

Local Relevance and Sensitivity .c _____ 6

Electricification _____ **7**

Issue Summary _____ 7

Key Comments and Recommendations _____ 7

Service to First Nations Communities. a _____ 7

Impacts on First Nations. b _____ 7

Non-industry Incentive Program. c _____ 7

Transmission _____ **7**

Issue Summary _____ 7-8

Key Comments and Recommendations _____ 8

A proactive approach is necessary . a _____ 8

Rsik of Stranded Investment. b _____ 8

Distribution of Benefits and Impacts are not the same. c _____ 8

Local First Nations Involvement is Essential. d _____ 8-9

Export Market Potential _____ **9**

Issue Summary _____ 9

Key Comments and Recommendations _____ 9

Priority to Domestic Requirements . a _____ 9

Financial Protection of First Nations and other consumers. b _____ 9

Protection Against Adverse Impacts .c _____ 10

First Nations Participationis Essential. d _____ 10

Coordination of IRP and Government Objectives .e _____ 10

Clean or Renewable Energy Development in First Nation Communities _____ **10**

Issue Summary _____ 10

Key Comments and Recommendations _____ 10

BC Hydro Policy Review . a _____ 10

Local Focus and Support Essential. b _____ 10-11

General and Process Related Issues _____ **11**

Issue Summary _____ 11

Key Comments and Recommendations _____ 11

Integrated Resource Plan Appendix 7G

Capacity Funding for Effective First Nation Participation . a _____	11
Opportunities for First Nations Input . b _____	11
Discussion and Consultation for Reconciliation . c _____	11-12
First Nation Issues Acknowledgement . d _____	12
First Nations Support for IRP . e _____	12
Drafting a Plan with First Nations . f _____	12
BC Hydro and Provincial Policy Incentives . g _____	13
First Nations Title and Rights and Treaty Considerations . h _____	13
Conclusion _____	13
BCH IRP First Nations Workshops _____	14

INTRODUCTION

BC Hydro's Integrated Resource Planning process (IRP) was announced in early 2010. The IRP is a comprehensive long-term process, assessing BC Hydro's requirements and developing plans to meet electrical generation needs for the next 20 years and transmission requirements for the next 30 years.

BC Hydro and the First Nations Energy and Mining Council (FNEMC) signed a Protocol Agreement in June 2010, committing to "work together on matters of mutual interest and benefit". BC Hydro proposed and FNEMC agreed that the IRP should be one of the first initiatives under the Protocol for FNEMC participation.

BC Hydro held organizational workshops in September 2010 to provide interested parties with information and to obtain input on BC Hydro's schedule and design of the process. FNEMC was invited and attended the organizational workshops, and provided preliminary views on process and related First Nations interests and needs.

BC Hydro initiated three areas of activity for the process – a Technical Advisory Committee to gather and analyze relevant technical data; a First Nations consultation stream; and a concurrent public/stakeholder consultation stream – both of the latter to be delivered through a series of meetings and workshops held in nine regions of the province throughout March and into early April 2011.

A second round of meetings and workshops is currently planned for September to provide input to BC Hydro on its draft plan which will be written by BC Hydro internally over the spring and summer months. The final IRP report and recommendations are required to be submitted to the provincial government in early December 2011. This timeline requirement is written into the Clean Energy Act.

FNEMC representatives have participated actively as a member of the Technical Advisory Committee, and attended all nine of the First Nations regional workshops. For information and comparative purposes, an FNEMC representative also attended one public/stakeholder meeting in Vancouver. A list of First Nation workshop dates and locations is attached.

As a provincial organization reporting to BC First Nations, the FNEMC's participation in the IRP First Nations "consultation" process is intended to provide a First Nation voice or perspective on issues relevant to all First Nations, support and facilitate participation by interested First Nations, and provide a voice on behalf of those First Nations that cannot or choose not to participate directly. It is not intended to supplant or replace direct First Nations engagement, and the FNEMC does not purport to formally represent the views of any particular First Nations or Tribal Council.

This report provides information to all BC First Nations on the regional workshops and "consultation process" to-date, feedback and comments on key issues to BC Hydro, and recommendations for consideration as the IRP continues and moves into succeeding phases. Observations and recommendations flowing from the Technical Advisory Group process are

not included in this report, but in a separate paper. We also note that BC Hydro has separately recorded and made available summary notes of each First Nation regional workshop; those notes are not duplicated or directly commented upon here.

For ease of reading and comparability of issues with other participants, the paper is organized in the same manner as the First Nations Input booklet provided by BC Hydro and used at each of the regional workshops. In addition to the six major topics covered therein, we have included a closing section on general and process related issues.

CONSERVATION AND EFFICIENCY

Issue Summary

The Clean Energy Act requires BC Hydro to continue and expand conservation measures as a way to meet a substantial part of its “supply gap” or demand growth over the coming years. BC Hydro is considering the feasibility of implementing even more ambitious targets in order to reduce the need for costly new generation. Measures in place or under consideration include existing and expanded Demand Side Management programs, energy efficient building standards, “smart metering”, distributed generation, community densification, and others.

The advantages of lower power bills, reduced need and thus lower costs for additional energy supply, reduced GHGs, and possible local employment are apparent. Some risks were also acknowledged – notably the requirement for government measures (policies and regulations) outside of BC Hydro’s control, the uncertainty of changes in consumer behaviour, and the adverse consequences of failing to meet established targets.

First Nations workshop participants were asked two general questions by BC Hydro: do First Nations have interest in pursuing greater conservation and efficiency, and what particular interests do First Nations have with respect to these objectives?

We heard dissenting voices regarding the first question – participants spoke clearly in support of conservation and efficiency as an objective. FNEMC is strongly supportive, and commends BC Hydro for its focus on Demand Side Management in particular. We expect that non-participant First Nations have similar views.

It is clear, however, that at a practical level beyond the simple objectives, First Nations have a number of important caveats and reservations on their support. These include inadequate and in some cases non-existent service from BC Hydro, First Nations access and program design suitability, affordability, substandard housing conditions and overcrowding, and concerns about possibly higher costs through such measures as smart metering.

Key Comments and Recommendations

FNEMC makes the following comments and recommendations to BC Hydro:

- a) **Remote Community Electrification:** BC Hydro's Remote Community Electrification Program or similar programs to extend reliable BC Hydro service into all First Nations communities must be a first priority. It is simply not possible for First Nations individuals and governments to seriously consider efficiency and conservation measures until they are receiving levels of service comparable to other communities.
- b) **Program Design and First Nations Access:** First Nations must be included in Demand Side Management related program design discussions to ensure that they are relevant to local conditions, and members can actually access them and take advantage of possible savings. In addition, easy access for First Nations to residential and commercial energy consumption data is necessary for effective planning. Housing conditions, overcrowding, unemployment and low incomes work against effective First Nations participation, and these must be taken into account to garner First Nations support and achieve expected results.
- c) **Housing:** Shortages and generally substandard housing conditions in many First Nations communities need to be considered by BC Hydro and government at all levels. FNEMC recommends consideration of a multilateral housing advisory body, with First Nations, Government, and BC Hydro participation. This body should assess and develop new building standards, renovation and incentive programs. This work could be in conjunction with the Assembly of First Nations new green building policy project.
- d) **Coordination with other government goals and objectives:** Government has a wide range of objectives, policies, and legislation outside the scope of, but nevertheless substantially affecting possible objectives and targets of BC Hydro's IRP. Economic development policies, population and immigration policies, building and transportation policies may all contribute to or be in conflict with IRP goals. Several workshop participants expressed concern that ordinary people might be expected to conserve only to serve the interests of more growth and lower costs in other sectors. FNEMC shares that concern. As with Housing above, FNEMC recommends a multilateral process be established or continued to consider and review serious conflicts or inconsistencies.

GENERATION OPTIONS

Issue Summary

To meet expected load requirements and comply with government direction in the Clean Energy Act, BC Hydro will require a mix of new energy generation. A full range of options – large and small scale hydroelectric, gas and coal fired plants, wood-based and other biomass facilities, wind, solar, wave, and geothermal have all been identified as feasible options for future development. Each source has different costs, reliability levels, GHG and environmental impacts, employment or other economic opportunities, etc.

Options and characteristics of each are being assessed in more detail by BC Hydro and Technical Advisory Committee members. For illustrative purposes and to serve for discussion of likely trade-offs and preferences, First Nations workshop participants were presented with three possible generation portfolios: one a mix of renewable sources only, one a renewable mix with the addition of Site C; and one a mix of renewable, Site C, and gas-fired generation. First Nations were asked to comment on and express any particular interests they might have with respect to each of the three portfolios.

While there is general support from First Nations for renewable generation of all types, numerous participants expressed concern and some perplexity regarding the portfolios, why they were chosen, how they were developed, how they would be evaluated, and the lack of any prior information on which to better understand or evaluate them. Some declined to offer any comment on Site C, knowing its controversial nature and giving priority to the interests of those First Nations in the region or who might be affected.

Key Comments and Recommendations

FNEMC offers the following:

- a) **Portfolios:** Presentation and discussion of the portfolios without any prior communication and involvement of First Nations to understand and participate at some level in their development was in FNEMC's view premature and seriously limited participant comfort and ability to make informed comment. Comparison of costs, back-up requirements, etc. are difficult or largely meaningless without context. Considerably more information and further involvement of interested First Nations prior to more advanced portfolio analysis and selection is necessary.
- b) **Assessment Criteria and Process:** There is little or no common understanding of how various portfolios and sources will be evaluated and recommended in the IRP. It is generally understood that certain "attributes" will be defined and measured, but how those will be chosen, weighted, and applied is unclear. FNEMC also believes that solely technical criteria and a solely or primarily technical assessment process will discount the value of more subjective characteristics and First Nations values. As above, more information and First Nations involvement is required prior to finalization of this work and development of a draft plan.
- c) **Local relevance and sensitivity:** First Nations interest and support for various generation options will depend on local conditions, local resources, and potential economic opportunities. As illustrated by Site C, First Nations concerns and opposition will also vary directly with expected impacts of development on local First Nations territory, environment, and other priorities. FNEMC submits that instead of province-wide scenarios and priorities, a more regional or "bottom up" approach to portfolio development and assessment, with full involvement of interested First Nations, is needed to incorporate local priorities and support for desired generation options.

ELECTRIFICATION

Issue Summary

Electrification or use of other fuels by industry and consumers in the province has historically been a matter of personal or business preference rather than public policy. Concerns over GHG emissions and related climate change projections have precipitated consideration of a more aggressive or pro-active approach to electrification. Oil and gas industry development in north-eastern BC is a very large and notable potential target or recipient of electrification.

To the extent that use of clean energy generation offsets use of fossil fuels, electrification in industry and transportation and heating will reduce provincial GHG levels. At the same time, however, electrification might require additional generation sources and could increase electrical rates above what they would otherwise be. First Nations were asked in each workshop whether they would support a more pro-active approach to electrification, and what First Nations interests should be considered if such an approach is adopted.

While at a high level, electrification was seen by many participants as a positive, concerns exist at a more practical or implementation level.

Key Comments and Recommendations

- a) **Service to First Nation communities:** As noted above, numerous First Nations in the province do not have or have inadequate, fossil-fuel based electrical generation systems in their communities. FNEMC recommends that extension of full and reliable electrical service to all First Nations communities in the province be the first priority, be properly resourced and a requirement of electrification initiatives.
- b) **Impacts on First Nations:** FNEMC is supportive of electrification to reduce GHG emissions and encourage innovation – but we are concerned that increased demand will mean higher rates for First Nations consumers, and will require additional generation and transmission facilities, with consequently higher impacts on First Nations lands and environment. Decisions on electrification made at a provincial level or in one area of the province should not impose pressure for unwanted developments, impacts, or costs on First Nations in another.
- c) **Not an industry incentive program:** FNEMC is also concerned that electrification should not become an industry incentive program, simply reducing costs and encouraging greater expansion for beneficiaries, at the expense of existing electrical consumers. New electrical system customers should pay full costs, including any marginal cost increases accruing to existing consumers.

TRANSMISSION

Issue Summary

Within the IRP, BC Hydro is assessing high voltage transmission requirements for the next 30 year period to ensure a reliable system capable of meeting demand and servicing

consumers throughout the province. Reliable transmission is essential to operation of the grid system serving communities in most of the province; it can encourage and facilitate regional economic development, and could contribute to GHG reductions if extended to new industry sectors and regions.

Like electrification, transmission planning and construction has historically been largely reactive, but there is increasing interest in a more planned, pro-active approach – reducing uncertainties, reducing costs and increasing system efficiency, and reducing environmental impacts and construction of multiple facilities in close proximity to each other. Concerns also exist, particularly with respect to the risk of stranded investment and unneeded facilities if expected generation does not materialize.

First Nations were asked for their views on a proactive approach to transmission, and what First Nations interests should be considered by BC Hydro if such an approach were taken. As with Electrification, a proactive approach is generally supported, many expressing the view that it could minimize environmental impacts and impacts on First Nations lands. Views and interest level in this topic varied considerably between Workshops, reflecting different previous experiences in some First Nations and regions.

Key Comments and Recommendations

- a) **A proactive approach is necessary:** FNEMC is very supportive and encourages BC Hydro to take a more proactive approach to transmission planning. We recognize that some degree of reactivity is unavoidable, but from the perspective of rational land-use, environmental protection, and long-term economic efficiency, it should be minimized to the extent possible.
- b) **Risk of stranded investment:** FNEMC believes that these risks can be managed and reduced to acceptable levels. It is possible to plan pro-actively, without fully committing to or actually constructing ahead of established triggers or thresholds. Potential environmental and economic benefits should considerably outweigh the cost of occasional error or miscalculation.
- c) **Distribution of benefits and impacts are not the same:** Requirements for new or expanded transmission correspond directly, although not always in proportion, with generation requirements. But we note that the geographic nature or effects of transmission are very different – generation projects usually are situated in and impact a fairly contained area, transmission lines often extending long distances and traversing large areas of unrelated and distant territory. Transmission disproportionately affects First Nations and rural lands, while serving the needs or interests of large demand centres elsewhere (typically urban centres). First Nations must be involved at all levels of planning for transmission projects involving First Nations lands and impacting on First Nations communities or citizens.
- d) **Local First Nations involvement is essential:** Smaller scale and distributed generation facilities may require proportionately less transmission than do large

scale facilities; remote facilities may require more new transmission than would centrally located plants of similar scale; and transmission needs may be reduced through planning and coordination to greater or lesser degrees in conjunction with or in advance of expected new generation. As above, generation decisions to satisfy needs of one area (Vancouver or the Lower Mainland for example) or one industry (oil and gas in Northeast BC for example) should not drive transmission decisions and impose disproportionate and avoidable adverse impacts on First Nations or other rural interests. Local consultation and involvement are necessary before project decisions are made.

EXPORT MARKET POTENTIAL

Issue Summary

The Clean Energy Act requires BC Hydro to consider the potential for export of renewable energy to outside markets. This requirement contemplates approval of generation and transmission facilities beyond those required to meet domestic needs and contingency or reliability standards. First Nation participants were asked to provide their perspectives on this subject – whether they supported developing export markets and facilities, and what First Nations interests should be considered in doing so.

Some participants expressed support or interest in exports from the perspective of possible economic opportunities for their First Nations; many others expressed concerns that export objectives would increase the projected supply gap, would create more demands and impacts on First Nations lands, could increase rates for domestic consumers, and could displace other more important First Nations and domestic objectives. There is significant concern that export market development would be pursued for the financial benefit of BC Hydro, the province, and select industry players, but with some adverse impacts and little or no benefit to First Nations and the general population.

Key Comments and Recommendations

As a matter of broad public policy, FNEMC submits that seeking First Nations support to meet recognized provincial needs is fundamentally very different than asking for such support to satisfy export interests. We note again the irony of pursuing additional exports while First Nations and some other communities within the province remain underserved.

FNEMC recommends the following to be applied to any further consideration and development of export markets:

- a) **Priority to domestic requirements:** Exports beyond system reliability requirements should be subordinate to conservation and efficiency objectives and to long-term provincial supply requirements.
- b) **Financial protection of First Nations and other domestic consumers:** Ratepayers must be protected from financial risk and rate increases associated with export market expansion.

- c) **Protection against adverse impacts:** First Nations must be protected from unwanted development impacts associated with generation and transmission projects required to serve export interests.
- d) **First Nations participation essential:** First Nations must be full participants in and beneficiaries of export oriented development. First Nations should be given clear priority rights to propose, develop, and operate any projects on or crossing First Nations lands.
- e) **Coordination of IRP and government objectives:** Government is clearly interested in pursuing economic development opportunities in all sectors and areas of the province. While that interest is legitimate and understood, it again raises the potential of conflict between recommended or agreed IRP directions and more general government economic ambitions. FNEMC submits that ongoing dialogue among government, BC Hydro, First Nations and stakeholders will be required to avoid future conflicts.

CLEAN OR RENEWABLE ENERGY DEVELOPMENT IN FIRST NATION COMMUNITIES

Issue Summary

BC Hydro invited participants to indicate and discuss their interest in clean or renewable projects within their communities and on reserve. No material was presented by BC Hydro as background to the discussion.

Many First Nations participants expressed support for the concept, based on the desirability of moving away from fossil fuels and to cleaner energy sources, the desirability of locally oriented and community owned or controlled projects, and the potential for associated economic opportunities.

Key Comments and Recommendations

FNEMC strongly supports a greater emphasis on clean or renewable energy and on locally owned First Nations projects. Meaningful involvement of First Nations in renewable energy project could significantly assist in meeting BC Hydro's objectives and requirements of the IRP, and could foster substantially greater First Nations interest, participation, and support for the IRP and subsequent BC Hydro processes.

We recommend the following:

- a) **BC Hydro policy review:** Working with First Nations, BC Hydro should review procurement, energy purchase, and related policies to facilitate First Nations developments and reduce financial or other barriers that currently discourage First Nations participation.
- b) **Local focus and support essential:** Projects must be suitable to local conditions and supported by the community. Early successes are essential. BC Hydro should establish services to provide technical, business, and other resource support to assist

interested First Nations in planning, assessing, and developing local facilities on a pilot or demonstration project basis.

GENERAL AND PROCESS RELATED ISSUES

Issue Summary

Many workshop participants raised serious reservations and concerns regarding the IRP process as it has been developed and presented to-date. In response, the workshop facilitator added them as a separate item of discussion in several workshops. Some relate to the overall process, and continuing disconnect between BC Hydro and First Nations expectations of meaningful consultation; others relate more specifically to particular aspects and components of the IRP.

FNEMC believes that a number of these concerns are fundamental to First Nations support or opposition to the process, and ultimate success or failure of the IRP itself. In that context, resolution of them may be more important than some or any one of the presented IRP objectives and analysis. We have not attempted to summarize discussions or issues presented at the various workshops, but have below listed and briefly explained a number of those that we see most critical for BC Hydro consideration. No order of priority or importance is intended.

Key Comments and Recommendations

- a) **Capacity funding for effective First Nations participation is necessary, particularly to assist with technical issues and analysis.**
As it includes both generation and transmission, the IRP is arguably a more comprehensive exercise than the BCUC Transmission Inquiry initiated in 2009. At the same time, the opportunities for input and assistance provided to First Nations have been significantly reduced. Fewer regional workshops are planned, those recently completed were considerably later in the overall process, there will be no public hearings and opportunity for examination of BC Hydro plans, and resource support to First Nations and First Nations organizations has been reduced or, in the case of technical assistance, eliminated.

- b) **BC Hydro must provide additional opportunities for First Nations input, and must if necessary extend timelines for the process to accommodate such input.**
First Nations in British Columbia are entitled to meaningful consultation – including the receipt of full and timely information, reasonable time and opportunity to respond, and the expectation that First Nations positions will be considered and accommodated. The changes noted above raise serious doubts about BC Hydro's commitment to consultations, and they may bring into doubt the validity of the process and decisions made.

- c) **Either during the IRP process or following it, but before government decisions are made, discussion and consultations are necessary to reconcile related policy directions.**

The process implies and raises expectations of decisions and policy directions to guide future electrical developments across the province. But the process also leaves out some players and other issues critical to a provincial strategy or plan. It is our understanding that Fortis BC, Columbia Power, and Alcan operations are not formally part of the IRP and thus may not be bound by certain policy directions. More importantly, the IRP understandably cannot incorporate or impose conditions on government policy beyond the mandate of BC Hydro, but it is not at all clear what consultations and inter-agency mechanisms are contemplated to harmonize and minimize inconsistencies or conflict.

- d) **It is critical to First Nations that local issues be fully acknowledged and given appropriate weighting.**

It is similarly unclear how the IRP process will integrate regional and community interests and priorities with provincial ones. Site C is a particularly obvious example of this issue and potential conflict between local or regional and provincial interests, as well as between First Nations and public or other stakeholder interests.

- e) **If First Nations support or endorsement of the IRP is desired, First Nations must be more fully included in the process.**

Notwithstanding early representations to the contrary, First Nations engagement in the IRP has been late and inadequate to-date, and further engagement is not planned until after a draft plan has been produced by BC Hydro. Recent regional workshops were, for most First Nations, their first information and exposure to the process. Most came without, and do not have, technical support or capacity to obtain the same. They were asked to provide feedback at the workshops and within a few weeks following on very complex and consequential issues. Most will not be involved again until a plan has been drafted and they are asked to comment. None were involved or provided with detailed information prior to the first workshops, and none are planned to be involved until the second. At that time, as one participant noted, 90% of all the decisions will have been made.

- f) **Prior to emergence of a draft plan, not after it has been internally produced, is the appropriate time for discussion of these connections.**

Similarly, the separation and connections between the technical and public and First Nations "consultation" streams is not clear. To this time, the two have been proceeding largely in isolation of each other, but the analysis and recommendations of each will necessarily need to be merged at some point. Designation of some issues as "technical" and others not is also a matter of perspective. First Nations characterization and emphasis given to various social, environmental, cultural, and even economic factors may be quite different than those of BC Hydro planners, technicians, and financial analysts.

- g) **BC Hydro and provincial policy must be changed to encourage participation and to offer revenue-sharing, royalty, or other financial incentives to First Nations.** The distribution and effects of “benefits” and “impacts” associated with energy developments are very different. Local areas, usually rural disproportionately bear the adverse effects, while consumers and industry participants, usually urban, reap the majority of benefits. First Nation communities must be full participants in all stages of development from planning through to operations, and they must be full beneficiaries of local developments.
- h) **Affected lands should be mapped and given “protected” status during planning and pending resolution of Claims.** First Nations rights and title interests, treaty rights, First Nations traditional territories, and lands subject to Land Claims negotiations must be recognized and accommodated in all stages of the IRP.

CONCLUSION

BC Hydro's Integrated Resource Plan is a strategic level planning exercise that will ultimately lead to impacts on Aboriginal rights and title. This is an important step in the overall consultation process because decisions flowing from the IRP will lead to specific projects on the ground. The FNEMC acknowledges that the IRP is a complex planning process. However, there are flaws in the First Nation consultation stream that threaten to impact its effectiveness. Up to this point, First Nations have been provided with basic information through informational workshops; the next step is for BC Hydro to prepare the IRP report and bring it back to First Nations for their input. First Nations would have liked to have been more meaningfully involved in the planning process and what we've experienced so far does not meet the test. Participants need prior information, they need to be engaged, and BC Hydro needs to be responsive to input and feedback, which involves reporting back as to how First Nations comments were incorporated and if not, why not. Additional opportunities for First Nations input must be incorporated into the process in between the information session and the review of the draft report. It should also be noted that First Nations were consistent in their comments calling for the resolution of past infringement before moving on to build new projects. We hope that BC Hydro seriously considers the comments made by First Nations throughout the regional sessions and re-evaluates its approach. FNEMC is willing to work with BC Hydro to further review these process issues and suggest areas of improvement.

**BC Hydro First Nations Workshops on the Integrated Resource Plan Schedule
First Series 2011**

First Nations Workshops			
Community	Date	Time	Location
Nanaimo	March 2	9:00- 3:00 pm	Vancouver Island Convention Centre
Campbell River	March 3	9:00- 3:00 pm	Coast Discovery Inn and Marina
Abbotsford	March 4	9:00- 3:00 pm	Ramada Inn and Conference Centre
Kamloops	March 7	9:00- 3:00 pm	Coast Canadian Inn
Vancouver	March 11	9:00- 3:00 pm	SFU School of Business
Terrace	March 14	9:00- 3:00 pm	Terrace Best Western
Fort St John	March 16	9:00- 3:00 pm	Quality Inn Northern Grand
Prince George	March 17	9:00- 3:00 pm	Coast Inn of the North
Castlegar	March 21	9:00- 3:00 pm	Fireside Inn

FIRST NATIONS ENERGY AND MINING COUNCIL

**REPORT TO BC HYDRO ON THE DRAFT
INTEGRATED RESOURCE PLAN**

AUGUST 2012
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INTRODUCTION	1
ORGANIZATION	1
OVERVIEW AND GENERAL COMMENTS	2
SECTION 1: FIRST NATION PERSPECTIVES ON RECOMMENDED ACTIONS		
▪ Recommendation 1	.....	2
▪ Recommendation 2	.....	3
▪ Recommendations 3, 4, 5	.....	3
▪ Recommendation 6	.....	3
▪ Recommendation 7	.....	4
▪ Recommendation 8	.....	4
▪ Recommendation 9	.....	5
▪ Recommendation 10	.....	5
▪ Recommendation 11	.....	6
SECTION 2: EXCLUSIONS AND OMISSIONS		
▪ Province-Wide Electrification	.....	6
▪ Export Market Development	.....	6
▪ Transmission Planning	.....	6
▪ Energy Planning from a First Nations Perspective	.....	7
▪ First Nations Equity Participation and Revenue Sharing	.....	7
▪ Remote Community Electrification	.....	7
SECTION 3: PROCESS ISSUES – PAST AND FUTURE		
▪ First Nations Consultations	.....	8
▪ Technical Support	.....	8
▪ Chapter 8	.....	8
▪ Past Infringements	.....	9
▪ Remaining Process Uncertainties	.....	9
▪ Post-IRP Policy Integration	.....	9
▪ Post-IRP First Nations Engagement	.....	9
CONCLUSIONS	.....	9

INTRODUCTION

The First Nations Energy and Mining Council (FNEMC) is pleased to provide this second report to BC Hydro (Hydro) on its Integrated Resource Plan (the IRP or Plan). The report focuses on actions recommended in the recently released draft Plan, certain issues not covered by the Plan, and the planning and consultation processes used to involve First Nations and gather feedback on their interests and concerns.

The FNEMC is regularly engaged with provincial government officials, provincial FN leadership, industry representatives, and individual Bands and members around the province. Through that engagement, it works to develop a thorough understanding of common issues and concerns relating to energy issues and to represent those fairly to government and its agencies – in this case, BC Hydro.

Consistent with terms of a 2010 agreement with Hydro, the FNEMC has participated throughout the IRP process in two forums. We were invited to participate as a member of the Technical Advisory Committee, and we also attended and participated in two rounds of regional First Nation meetings around the province, one in early 2011 and the latter just completed in July of this year.

Participation on the Technical Advisory Committee was through Intergroup Consultants Ltd., a management consulting firm with extensive energy related experience throughout Canada. Participation in the regional first Nations consultations was primarily provided by The Lawson Trading Company Ltd., having senior public policy and First Nations experience. Both representatives reported on a regular basis to the FNEMC, and FNEMC staff also participated directly in a number of meetings.

As indicated in our 2011 interim report, FNEMC participation in the process has been intended to provide a FN perspective on general or province-wide issues, to provide support and advice to participating FNs, and to represent and give voice to certain issues on behalf of the many FNs who for whatever reasons were not able to participate directly. FNEMC involvement has been to supplement, but not to bind, replace or displace in any way the views and rights of individual FNs.

Lastly, the views expressed here reflect FNEMC views based largely on what we have heard and learned through participation in the Hydro process and through other FN discussions. The report is necessarily a summary of key issues only; we recognize there are different priorities, perspectives, and priorities among FNs just as among other stakeholders and the public, and we do not suggest that the report captures or includes all of those.

ORGANIZATION

The report is presented in two parts. First, a policy focused document containing general comments about the overall Plan, addressing process and policy issues arising in the Plan, FN perspectives and implications of the recommended actions, and some observations on

the process to this point and going forward. Second, a separate and attached technical review, providing more detailed comments on specifics of the Plan and Technical Advisory Committee considerations preceding it.

Section I below provides very brief response and comment on each of Hydro's recommended actions. Section 2 touches on some important issues not addressed by the Plan. Section 3 addresses a number of process issues as they relate to work to-date and to future approval and implementation of the Plan.

OVERVIEW AND GENERAL COMMENTS:

The draft Plan identifies a continuing and substantial need for more energy production over the coming 20 year period. It goes on to suggest three broad areas for future action to address the growing need and forecast supply gaps: first, conserving more; second, building and reinvesting more in existing assets; and third, buying more energy as an interim or last resort option.

In principle, the FNEMC endorses this approach and the priority of recommended actions. Energy conservation and efficiency measures are widely supported by FNs, as are the directly related benefits of reduced GHG emissions and fossil fuel combustion. Reinvestment in existing assets is similarly supported, being in many cases more cost-effective and having significantly lower environmental impacts than new construction. Some purchase and development of additional energy is a recognized necessity; FNs will support both provided that adverse impacts are fully considered and opportunities are available for meaningful FN participation.

The FNEMC recognizes that BC Hydro is a leading utility in energy conservation programs, and that the Government of British Columbia has taken some a number of positive steps to limit GHG emissions and fossil fuel use. It is constructive and encouraging to see these commitments reflected in Hydro's long term plans.

The FNEMC has reservations, questions, and concerns about specifics of the Plan and its implications for FN interest. We are, however, supportive in principle of the overall directions taken.

SECTION 1: FIRST NATION PERSPECTIVES ON RECOMMENDED ACTIONS

(Note: recommendation numbers used in this paper are based on those used in the FN presentation documents; they do not correspond perfectly with numbering in Chapter 9 of the draft plan or in the technical report prepared by Intergroup.)

Recommendation 1: Hydro proposes to conserve more by reduced energy consumption in the years ahead. Specific actions include increasing energy savings targets through conservation and efficiency programs, incentives and regulations, and exploring more codes, standards and rate options for savings.

FNEMC supports this recommendation provided that implementation of the various measures is based on incentives rather than penalties, that program design takes into account the circumstances of rural and off-grid FN communities, recognizes the need for business and economic development on RN lands, and ensures accessibility for lower and fixed income people – a too common circumstance for many FN members. FNs should be directly engaged in program design and delivery.

Recommendation 2: Hydro recommends encouraging lower consumption during peak demand periods through voluntary conservation programs for residential, commercial, and industrial customers.

FNEMC supports this recommendation subject to the same caveats noted above. We would also comment, as a number of participants did during the regional workshops, that there would be FN support for additional and mandatory measures such as time-of-use rates, so long as those were not punitive to residential and rural users.

Recommendations 3, 4, and 5: Hydro recommends building and reinvesting more in generation assets; specifically to build the proposed Site C project on the Peace River, to add a sixth generating unit at the Revelstoke Generating Station, and to advance additional Resource Smart projects to increase capacity from existing infrastructure.

FNEMC does not support inclusion at this time of Site C. FNEMC and FNs have expressed concern since inception of the BCUC Section 5 Inquiry and repeated throughout the IRP process that the approved IRP will be subsequently used by Hydro and government to justify particular projects and reduce or eliminate normally required rigorous scrutiny of those. It is appropriate and necessary for Hydro to look to large generation sources to meet growth in demand, and a preliminary assessment of the options possibly available might well be recommended. But, inclusion of Site C at this stage is inconsistent with the concept that the Plan is to provide overall direction, but not determine individual projects.

Some FNs have also declined to indicate support or otherwise comment on the Site C project as it will be situated and should be first and foremost a matter of consultation and negotiation with affected FNs in the area. Extensive social/environmental assessments and regulatory process must be completed before Site C approval; in the interim, reliance on the project as the largest contributor to new generation capacity creates major uncertainty and implications for other parts of the Plan.

FNEMC supports the focus on Resource Smart options, including addition to the Revelstoke plant. To the extent such options to increase efficiency are cost-effective, they are a preferred approach over new construction, minimizing new land and environmental impacts, and maximizing overall system efficiency.

Recommendation 6: Hydro proposes using a combination of resources to meet an expected short-term capacity gap – first, using market purchases; second, accessing power

available under the Columbia River Treaty; and third, extending utilization of the Burrard Thermal Generating Station as necessary.

In general, FNEMC supports these options. FNEMC agrees with use of available power from the Columbia River Treaty, and with backup use of the Burrard Thermal Station as needed. The purchase of additional power on an interim basis is also supportable, and we recognize likely unavoidable under current demand projections.

We do question, however, in light of overall commitments to green energy, why additional market purchases would be made ahead of using power from the Columbia River Treaty. To our understanding, the former would be hydro, while the latter, depending on source, might most likely be thermal generated electricity. Provincial commitments to clean energy and reduced GHG emissions are ultimately much less meaningful if accomplished through displacement of emissions onto neighbouring jurisdictions rather than through real reductions.

Recommendation 7: Hydro proposes to upgrade transmission capacity in the northwest by reinforcing the existing 500kv line from Prince George to Terrace. To meet currently projected demand from initial Liquid Natural Gas (LNG) facilities, this project will need to be in service by 2016.

We note that some initial work is already underway on this project, so inclusion in the plan is perhaps debatable, apart from the commitment to re-evaluate in the event that load forecasts do not materialize as expected. Nevertheless, as the FNEMC endorses upgrading of existing infrastructure where possible and cost-effective, we are supportive in principle of this project. The large amount of uncertainty regarding future LNG facilities, and the recent government announcement regarding the designation of natural gas as clean energy for the purposes of generation for such facilities do, however, raise serious questions and highlight the need for very timely and effective contingency planning. The LNG and electrification issues are further addressed under Recommendations 9 and 10.

Recommendation 8: To meet short-term supply needs, Hydro intends to develop procurement options for the purchase of approximately 2000gwh of additional generation from clean energy producers in the province.

The FNEMC and many FNs are supportive of clean energy and privately owned and developed generation. Both are subjects of great interest, a number of communities still being off-grid and dependent on diesel generation, and many also looking at development possibilities to provide additional local economic benefits. Some important conditions are essential to FN support for specific projects and a successful call for more IPP generation:

- FNs need to be afforded opportunities to be full participants in the procurement process and future projects, including the possibility of a preferential call for FN owned projects.
- FN rights and title interests must be fully respected; earlier processes that encouraged a mini staking rush in FN traditional territory by potential developers

seeking potential micro-hydro sites caused unnecessary resentment and exclusion. Unused water rights or licenses from those events should revert back to the province or to local FNs.

- Calls need be sensitive and flexible to accommodate constraints on FN capacity and financing source; the process can and should be designed to encourage rather than discourage FN interest.

Recommendation 9: Hydro proposes to work with LNG developers and keep electricity options open until their needs are more certain; and specifically to a) undertake planning, preliminary design, and consultations on new transmission from Peace River to Prince George and Prince George to Terrace and Kitimat, and b) develop procurement options for additional clean energy and natural gas generation in the event it is needed for these developments.

The FNEMC has taken no position on the LNG facilities, and is not opposed in principle to supplying them with electricity. It is apparent, however, that government direction on clean energy requirements to be met by Hydro is to some degree inconsistent with government policy on LNG. Recent announcements that natural gas to power the LNG industry will be considered clean when for all other purposes it is not highlight the inconsistency. Transmission costs should be carried by the developers, not general customers. And we note that the new transmission planned to come from Peace River assumes that Site C will be approved and coming into service; FNEMC believes this is a still very uncertain and problematic assumption.

With respect to additional procurement options to service LNG (and possibly the natural gas industry in northeastern BC), earlier points regarding IPP procurement would be applicable. In most circumstances, generation relatively near to demand is also efficient and desirable. FNs traditional lands extend across the north, and northern FNs may have more limited economic opportunities than elsewhere in the province; they should be consulted early, and given first or full opportunity to develop or co-develop additional generation projects.

Recommendation 10: Hydro proposes to monitor northeast natural gas development to keep options for industry electrification and related transmission open.

As with LNG, the FNEMC and FNs individually are generally open to (and in some instances participating in) development of the natural gas industry. We do not object to electrification – and are in fact supportive to the extent that will contribute to lower fossil fuel use and GHG emissions. But such support also comes with important reservations:

- FNs and other Hydro consumers should not face tighter supply, higher costs, or more non-clean generation requirements as a result of extending electricity to the oil and gas industry,
- Industry should be required to pay full costs of new or upgraded transmission, and
- FNEMC again notes inconsistencies between various government policies (GHG targets, clean energy requirements, natural gas policy, LNG policy, etc.) which may

influence these decisions. While sympathetic with Hydro's obligations to plan within the legislative and policy direction it has received from government, we believe it nevertheless incumbent on Hydro to comment on inconsistencies with broader policy and to appeal to government to address those.

Recommendation 11: Hydro recommends working with industry to explore options to meet peak capacity requirements through pumped storage and additional natural-gas fired generation.

We heard little FN interest beyond curiosity regarding pumped storage possibilities. As the concept is entirely untested in the province, it is difficult to gauge possible FN interest and project feasibility. Provided however that such facilities can be developed in an environmentally responsible manner, and with assurance of long-term need and appropriate rate design to ensure financial viability, individual projects could be a suitable vehicle for FN investment. The FNEMC would be supportive in those circumstances.

Gas offers the obvious advantages of firm supply, relatively short lead times compared to other facilities, flexibility of location, and reduced transmission requirements. As the IRP notes, however, relatively little work has been done on gas fired generation for many years. Extensive consultation with FNs and others will be required before new projects of any magnitude can be brought on-stream.

SECTION 2: EXCLUSIONS AND OMISSIONS

A number of significant issues and initiatives are not included in Hydro's recommended actions, some of those being previously proposed for inclusion and others being raised by FNs in the initial round of regional workshops.

Province-wide Electrification: In addition to the natural gas industry, electrification of ports, vehicles, industrial equipment, and end-use heating were all put forward for consideration in early discussions. We note that Hydro has determined that further analysis and exploration of these possibilities should occur, but no further action is proposed at the present time. Given already difficult targets for clean energy, projected demand increases, and substantial uncertainty regarding supply options such as Site C, we concur.

Export Market Development: FNEMC and many FNs expressed serious concerns in 2011 with government direction and proposals to pursue expanded exports. Most recent Hydro analysis indicates insufficient market opportunities for the foreseeable future. It remains our view that domestic needs, reasonable pricing, clean energy and GHG emission targets should all continue to receive higher priority than future export possibilities.

Transmission Planning: Hydro invited debate and comments in 2011 regarding its approach to transmission planning; there was considerable support among FN participants for a proactive approach that would reduce environmental impacts and reactive

transmission developments that increasingly fragment FN and other rural lands. The FNEMC addressed this issue in its 2011 report, observing that the advantages of effective planning could substantially outweigh perceived risks and disadvantages. Hydro now proposes to continue a status quo or essentially reactive approach on this issue. We believe that is a mistake.

Energy Planning from a FN Territorial Perspective: Hydro has acknowledged in recent documents and FN presentations that it did not adopt 2011 submissions from FNs and the FNEMC that FN rights and title to traditional territory in the province be considered as a fundamental basis on which to plan future generation and transmission requirements. Hydro has argued in effect that as the IRP is to be a province-wide plan, it is not feasible to build it based on FN territorial or other local priorities.

The FNEMC does not accept that argument. In our view, it is entirely possible for Hydro and the province to initiate planning first from a local or regional perspective and to build on those to form provincial plans and policy. Certainly, a combination of regional and province-wide approach is feasible.

We believe that FN legal interests must be fully considered and incorporated at the outset of planning rather than at the end; FN and related regional land-use plans in the province should be a priority for completion; comprehensive cumulative effects assessments must be undertaken and carried forward. Taking these steps would unquestionably reduce future conflicts, increase FN access and interest in participation in energy development opportunities, enhance support for the IRP, and facilitate future Hydro-FN cooperation on other issues.

First Nations Equity Participation and Revenue Sharing: The FNEMC and other participants commented in 2011 on the need for Hydro and the province to adopt new ownership and revenue policies to permit and facilitate FN participation in major energy projects. In addition to early engagement of FNs in the planning process as noted above, we see equity and revenue-sharing policies, now adopted in several other jurisdictions and widely used by industry in various sectors of the economy, being key to FN economic and social development, and to local or regional support for major projects.

It is clear that major developments can and often do have significant adverse impacts on the local environment and FN lifestyles, while offering the majority of benefits to customers or shareholders far distant from those impacts. Yet government and Hydro continue a very restrictive and conventional approach to resolution and mitigation; it is disappointing that more progressive and inclusive concepts do not appear to be even referenced in the IRP documents. They are needed if government and Hydro are genuinely committed to improving FN relations, and if the IRP, when completed or approved, is to receive broad acceptance and support for implementation.

Remote Community Electrification: While already operating and technically not part of the IRP process, the FNEMC wishes to reiterate its support for this program. Basic services,

reliability, and affordability of electricity have been long-standing issues for many rural and isolated FN communities. It is difficult, and even absurd in some circumstances, to seek support from FNs for energy conservation, clean energy, and major new generation and transmission facilities around the province at the same time as people remain without adequate or reliable service to their homes or community. We encourage Hydro to continue the RCE program, to maintain long-term commitments to replacing remote diesel generation with renewable or clean energy sources, and to re-establish terminated DSM measures or establish new home conservation initiatives to replace them.

SECTION 3: PROCESS ISSUES - PAST AND FUTURE

FNEMC has participated in both the technical and First Nations consultation streams of the IRP since its inception in 2010; it was also a participant in the 2009 Section 5 BCUC Inquiry. We acknowledge that Hydro has worked diligently to produce a long term plan to guide its operations over the next 20-30 years, but we must also comment that the ability of FNs and others to rely on the process and Plan yet to emerge has diminished somewhat. Participation and debate in the most recent regional workshops was notably less than in the first round in 2011.

Government interruption of the process on two occasions has created policy uncertainty and demanded considerable additional time and effort from participants; the government interventions raise questions about the extent to which the IRP will ultimately be a rational electrical energy planning exercise or a political one. We sincerely hope that the process will now be completed on the schedule indicated in recent FN workshops and public/stakeholder meetings.

The FNEMC would like to make a number of more specific comments on the process to-date, and recommendations as the Plan moves forward to completion and implementation.

FN Consultations: FNEMC and other FN representatives have commented on the inadequacy of “FN consultation” throughout the process. Scheduled workshops and presentations by Hydro have been a useful mode of information sharing, but they do not in our view meet the need for meaningful consultation.

Technical Support: Representations were made to Hydro in 2010 and 2011 to provide technical assistance or resources in some way to aid FN participation; some funding was initially made available through the FNEMC, but that was not carried forward or repeated in 2012, leaving many FNs with no capacity or external technical support to assist them in understanding and responding to the voluminous work and many issues and recommendations in the IRP.

Chapter 8: Omission in the draft IRP and documentation recently released of a more complete record of FN and other input and Hydro responses to that, left participating FNs disadvantaged, effectively requiring them to search through hundreds of pages of documentation to see if concerns they or others previously raised were considered and

adopted in some form or rejected by Hydro. FNEMC and others have requested that a summary compilation of FN issues and Hydro responses be circulated or made available to participants at an early date and before the IRP is finalized.

Past Infringements: Many FNs in the province have serious long-standing grievances with respect to infringements of their lands and rights resulting from previous or existing Hydro activities and facilities. Some have raised these issues in the IRP process, noting that it is unreasonable and unacceptable for Hydro to seek support for future actions before addressing outstanding grievances. FNEMC submits that Hydro and government need to take a pro-active approach to resolving this problem before they can reasonably expect support from affected FNs for new initiatives.

Remaining Process Uncertainties: It remains unclear what, if any, opportunity will be extended to participants by Hydro to comment on revisions to the draft IRP, or by government before it approves or amends the final IRP it will receive from Hydro. Questions on this were raised in the recent FN workshops, but Hydro representatives were unable to answer them at the time. FNEMC submits that FNs and other participants should be permitted to review the revised Plan, review the record and response to consultation input, and comment to Hydro and/or government before the IRP becomes approved policy.

Post-IRP Policy Integration: FNEMC and others have commented on apparent inconsistencies among related government economic policies - clean air and GHG emission standards, Hydro clean energy requirements, LNG policy, and natural gas policy being most relevant in the IRP context. We recognize that these policies are beyond the scope of Hydro's IRP, but we urge Hydro to note the issues to government in transmittal of the IRP, and we hope that the province will take steps to address them.

Post-IRP First Nations Engagement: Hydro has advised that approval of the IRP will be followed by reviews and updates on a five year basis. FNEMC agrees with this requirement, and suggests that an initial review should likely be scheduled somewhat earlier, perhaps in three years or whenever some of the most significant uncertainties in the Plan – Site C, LNG development – are clarified and current or contingency plans become more immediately relevant. During each such review, we encourage Hydro to inform and involve FNs and the FNEMC well and early on the process.

CONCLUSIONS

FNEMC is pleased to have been an active participant in the IRP process. We trust that our involvement has been constructive and valuable to Hydro and to FNs.

As noted at the outset, the FNEMC is generally supportive of the comprehensive and long-term approach to planning reflected in the IRP. We acknowledge Hydro's willingness and efforts to inform and meet with FNs. And we support in principle the overall directions included in the draft Plan.

At the same time, there are issues that need to be resolved, and we believe that more can and should be done to engage FNs, both in the planning process and in future development of facilities and services throughout the province.

FNEMC believes that work to-date should be regarded more as the start of a continuing process than as completion of a limited process. On that basis, we and many individual FNs will be pleased to work with Hydro, industry, and other consumers on this and other projects in the future.

**Appendix 17 — B.C. First Nations Energy and Mining Council
Technical Advisory Committee Reports**

FIRST NATIONS ENERGY AND MINING COUNCIL

**COMMENTS ON TECHNICAL ADVISORY COMMITTEE
PARTICIPATION FOR THE INTEGRATED RESOURCE PLAN**

May 6, 2011

TABLE OF CONTENTS

INTRODUCTION	1
CONSERVATION AND EFFICIENCY	2
Issue Summary	2
Key Comments/Recommendations	2
ELECTRICITY GENERATION OPTIONS	4
PORTFOLIO #1: RENEWABLE MIX PORTFOLIO	4
Issue Summary	4
Key Comments/Recommendations	5
PORTFOLIO #2: RENEWABLES WITH SITE C	5
Issue Summary	5
Key Comments/Recommendations	6
PORTFOLIO #3: RENEWABLE MIX WITH SITE C AND GAS-FIRED GENERATION	7
Issue Summary	7
Key Comments/Recommendations	7
ELECTRIFICATION	9
Issue Summary	9
Key Comments/Recommendations	9
TRANSMISSION PLANNING	10
Issue Summary	10
Key Comments/Recommendations	11
EXPORT MARKET POTENTIAL	12
Issue Summary	12
Key Comments/Recommendations	12

INTRODUCTION

The Integrated Resource Plan (IRP) is BC Hydro's plan for obtaining the resources necessary to meet provincial electricity requirements for the next 20 years. The IRP includes several components:

- A load forecast, which estimates how much electricity British Columbia will require over the next 20 years.
- Conservation initiatives that BC Hydro could pursue with its customers in order to reduce the amount of electricity that must be supplied.
- An evaluation of generation and transmission resources that could be acquired in order to meet the gap between existing resources and those required to serve future load growth.

BC Hydro examines each of these components under different potential future market scenarios, for example high or low future economic growth. Potential generation and transmission resources are evaluated across different indicators including cost, environmental impacts and economic benefits. Specific objectives for the IRP are set out in the Clean Energy Act which came into effect in 2010. The Clean Energy Act requires BC Hydro to complete its IRP and submit it to the provincial government before the end of 2011.

As part of the IRP process, BC Hydro established a Technical Advisory Committee (TAC). The purpose of the TAC is to provide ongoing feedback and expert advice to BC Hydro during the development of the IRP. BC Hydro has committed to considering input and advice from TAC members in developing the IRP. **However, the IRP is BC Hydro's document and BC Hydro is not bound by recommendations or advice it receives from TAC members.**

BC Hydro requested that the BC First Nations Energy and Mining Council (FNEMC) participate as a member of the Technical Advisory Committee (TAC). The FNEMC retained a consultant to participate on **the FNEMC's behalf and to provide the FNEMC with a summary of comments and analysis following each TAC meeting.** TAC meetings were held on December 14, 2010; January 26-27, 2011; February 14, 2011; and April 5-6, 2011.

TAC meetings originally scheduled for April 27-28, 2011 **to review the initial results of BC Hydro's analyses** were postponed in light of the provincial government review of BC Hydro rates that was announced in April. As a result, TAC members have not to date reviewed draft results of significant portions of the IRP. Despite this delay, BC Hydro has requested comments from TAC participants on five topic areas. This document **summarizes the FNEMC's comments on the five topic areas from a TAC participation perspective.** A separate document has been prepared summarizing the FNEMC's comments on BC Hydro's First Nations consultation process.

CONSERVATION AND EFFICIENCY

Issue Summary

BC Hydro's current load forecast projects an increase in electricity sales of approximately 14,000 GW.h or 27% by fiscal year 2020¹ before including any savings that might be accomplished through conservation and efficiency improvements. Conservation, sometimes called Demand Side Management (DSM), is the cleanest way to address future load growth. The Clean Energy Act includes an objective for BC Hydro to reduce the expected increase in electricity demand by the year 2020 by at least 66%.

Conservation methods can take many forms, from providing assistance to customers to purchase more efficient appliances and equipment; electricity rates that are designed to let customers know the full cost of electricity use and working with government to require higher energy efficiency standards for buildings and electrical equipment. However, one of the challenges with conservation and efficiency improvements from a planning perspective is that it is difficult to track and confirm conservation and efficiency improvements over time. Therefore, it can be hard to know how well these programs are performing relative to targets.

BC Hydro has provided information to the TAC that evaluates a range of conservation options targeting different levels of future conservation and efficiency improvements. In general, in order to achieve greater future electricity savings, BC Hydro needs to spend more money on DSM programs and needs help from all British Columbians to make a commitment to reduce their own electricity consumption. If the conservation and efficiency improvements are successful it could mean fewer impacts on the environment in the future (since it would help avoid the need to build new electricity generation and transmission projects) and lower electricity rates (if spending on DSM to avoid future electricity consumption is lower than the cost of building new generation and transmission projects). However, it is difficult to measure or estimate avoided electricity use and therefore difficult to evaluate the success of spending on conservation programs.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Sustainability:** As stewards of the land, First Nations are committed to the responsible use of lands and waters to ensure their availability for future generations. Improving conservation and efficiency is consistent with sustainability and sustainable development which are core principles of the BC First Nations Energy Action Plan.
- **Pursue Economic Conservation/DSM Opportunities:** Given the benefits of improved conservation and efficiency, (including reduced environmental impacts; improved efficiency and lower energy costs) BC Hydro should pursue all economic conservation/DSM opportunities.

¹ 52,024 GW.h in F2011 increasing to 65,939 GW.h in F2020.

- BC Hydro and the Province of British Columbia should provide capacity funding for energy managers to support energy conservation in First Nations communities.
- **Access to Conservation Initiatives:** Access to DSM/Conservation initiatives is a challenge for many First Nation communities – particularly those in rural and remote locations. BC Hydro needs to ensure its DSM programs are accessible to all First Nations communities. Relevant considerations in this regard include:
 - In First Nations communities housing costs and electricity bills may be paid by the Band and not the individual or family residing in the home. Therefore conservation programs involving financial incentives/assistance for repairs and upgrades or reduced electricity bills may not be as effective as in other communities.
 - Access to capital dollars for repairs and improvements to community facilities (both residential and commercial) may be limited compared to other communities.
 - Codes and standards applicable in First Nations communities may differ from provincial standards.
- **Funding for First Nation Community Energy Managers:** In recognition of the specific challenges associated with conservation/DSM initiatives in First Nations communities, BC Hydro and the Province of British Columbia should provide capacity funding for energy managers to support energy conservation in First Nations communities.
- **Communication:** Much of BC Hydro's communication related to DSM and conservation in the IRP process focuses on the need to make sacrifices and the consequences if conservation targets are not achieved. BC Hydro should instead focus its communication on conservation initiatives on the benefits to First Nations and British Columbia, including reduced environmental impacts, less waste and lower energy costs.

ELECTRICITY GENERATION OPTIONS

In its consultation materials, BC Hydro describes three electricity generation “portfolios” that represent different potential strategies for addressing the need for future electricity resources. BC Hydro has not yet provided detailed comparisons of the costs and benefits of the different portfolios to the TAC members. However, a brief summary of the options identified by BC Hydro and specific comments on each option based on the information available to date are provided below.

PORTFOLIO #1: RENEWABLE MIX PORTFOLIO

Issue Summary

BC Hydro’s first portfolio includes plans to meet future electricity requirements from renewable sources including wind, run-of-river hydro-electric and biomass. New projects would be developed by independent power producers (IPPs) with BC Hydro purchasing electricity from the IPPs. The Site C hydro-electric project is excluded from this portfolio. BC Hydro notes that since renewable generation resources aren’t always available (for example when the wind isn’t blowing or when water flows are low) this portfolio would also require additional back-up resources to ensure electricity demand at peak times could be met. These back-up resources might include expanding existing BC Hydro hydro-electric generation stations, using pumped storage or natural gas-fired generation.

Although BC Hydro has not yet provided detailed information on the potential costs and benefits of this portfolio to TAC members, at a high level BC Hydro notes this portfolio has the following characteristics compared to other portfolios:

- **Diverse Resource Mix:** This portfolio would include a variety of different types of electricity generation sources including wind, hydro-electric and biomass.
- **Lower Greenhouse Gas Emissions:** This portfolio relies largely on renewable resources and therefore would have lower greenhouse gas emissions than some other portfolios.
- **Dispersed Environmental Impacts and Benefits:** Renewable resource developments would involve developing a greater number of smaller electricity projects throughout the province. As a result the potential environmental impacts and the economic benefits (in terms of community ownership of projects and related jobs) would be more dispersed across the province.
- **Higher Costs:** Electricity purchased from renewable energy IPPs generally costs more than other potential electricity sources. Therefore, the cost of electricity is likely to be higher with this portfolio than with other portfolios. BC Hydro has not to date provided detailed estimates of the electricity costs associated with each portfolio.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Support for Renewable Energy Projects:** First Nations strongly support the development of clean, renewable sources of electricity to meet future energy requirements. Many First Nations are currently experiencing the direct negative effects of climate change. Ensuring future electricity needs are supplied by clean and renewable sources will help respond to the impacts of climate change and stabilize greenhouse gas concentrations.
- **Support for Locally Developed and Owned Projects:** In the past, resource developments imposed environmental damages without ensuring benefits for local communities. First Nations support projects that are developed and owned directly by the community or through partnerships. This helps to ensure projects are developed in a manner that is consistent with the broader plans and objectives of local communities in mind.
- **Balancing of Costs and Benefits:** It is recognized that the cost of future development projects must be taken into account in long-term planning. A focus on conservation and sustainability can help to ensure increasing electricity prices do not become a burden on local residents or become a barrier to other types of economic development.

PORTFOLIO #2: RENEWABLES WITH SITE C

Issue Summary

BC Hydro's second portfolio includes the Site C hydro-electric project in its plans to meet future electricity requirements. Electricity requirements beyond those that could be supplied by Site C would be sourced from renewable energy based IPPs. This portfolio would also require additional back-up resources to ensure peak electricity demands could be met. However, since Site C can provide energy storage and additional capacity, these requirements would lower than the first portfolio.

Although BC Hydro has not yet provided detailed information on the potential costs and benefits of this portfolio to TAC members, at a high level BC Hydro notes this portfolio has the following characteristics compared to other portfolios:

- **Lowest Greenhouse Gas Emissions:** This portfolio would produce the lowest greenhouse gas emissions of any of the portfolios as it relies largely on renewable resources.
- **Concentrated Environmental Impacts:** Environmental Impacts would be concentrated in the Peace region with approximately 5,000 hectares of flooding.²

2

http://www.bchydro.com/etc/medialib/internet/documents/planning_regulatory/site_c/201002/site_c_ba_ckgrounder.Par.0001.File.Site_C_Backgrounder_6_2_2010.pdf

- **Mid-Level Costs:** Costs for this portfolio are expected to be lower than portfolio #1, but higher than portfolio #3. However, it should be noted BC Hydro has not yet provided updated capital cost estimates for Site C.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Conflicts between Provincial Level Planning and Regional/Local Environmental Impacts:** Site C highlights the conflict between provincial level energy planning and regional environmental impacts. In order to develop Site C, local First Nations and communities would be asked to bear significant impacts on lands and water. One of the core principles of the First Nations Energy Action Plan is recognition of the autonomy of individual First Nations in decision-making for their traditional areas. No decisions or plans with respect to Site C can be made without meaningful consultation and accommodation with First Nations whose lands and waters would be impacted.
- **Funding Required for Local and Regional Development Plans:** There is a need for better development and coordination of energy planning with regional and local planning processes. BC Hydro and the provincial government should address funding for local and regional development plans.
- **Early Engagement Necessary:** Site C also highlights the need for early engagement of First Nations and local communities in resource development projects. First Nations must have the opportunity and the necessary resources to understand and evaluate development proposals.
- **Full Impacts of Development must be Understood:** In order to make informed decisions on new developments, a complete understanding of the potential environmental and human effects of the development must be undertaken. This includes an assessment of impacts at the regional level and an assessment of cumulative effects with other activities in the region.
- **Benefits must be Shared:** If new projects, including Site C, can be developed in a manner that is acceptable to the impacted First Nations and communities, mechanisms must be in place to ensure the economic benefits of the project are shared fairly with the local communities. Benefit sharing must extend beyond simply offering short-term construction-related employment to local residents. Revenue sharing and project ownership must be included as benefits for local First Nations and communities. Best practices from other Canadian jurisdictions should be reviewed and incorporated into project planning and development.³
- **Capital Costs of Site C must be Reviewed:** Capital costs for major hydro-electric facilities can change dramatically in a short period of time. For example, Manitoba Hydro has recently updated its capital cost estimates for the Keeyask and Conawapa generating stations. The most recent 2010 capital cost forecasts are both 50% higher than the 2008 forecasts. Manitoba Hydro notes

³ As an example, the Nisichawayasihk Cree Nation participation in the Wuskwatim generation project in Manitoba.

these cost increases are due to more current market information and delays in the in-service dates for both facilities.⁴

PORTFOLIO #3: RENEWABLE MIX WITH SITE C AND GAS-FIRED GENERATION

Issue Summary

BC Hydro's third portfolio includes Site C, renewable energy purchased from IPPs and gas-fired generation as allowed under the 93% renewable target in the Clean Energy Act. Since both Site C and gas-fired generation provide back-up ability the need for other sources of back-up is reduced. Although BC Hydro has not yet provided detailed information on the potential costs and benefits of this portfolio to TAC members, at a high level BC Hydro notes this portfolio has the following characteristics compared to other portfolios:

- **High Degree of Operating Control:** With both Site C and gas-fired generation available, this portfolio would provide the highest degree of operating control of the three portfolios. As a result no additional back-up resources would be required.
- **Concentrated Environmental Impacts:** As with portfolio #2, environmental impacts of Site C would be concentrated in the Peace region.
- **Higher Greenhouse Gas Emissions:** Because of the use of natural gas generation, this portfolio has the highest greenhouse gas emissions of the three portfolios.
- **Lower Initial Cost:** Costs for this portfolio are expected to be the lowest of the three portfolios initially, but there are risks of higher future costs due to potential increases in natural gas prices and greenhouse gas emissions costs.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Concerns Related to Site C:** The FNEMC reiterates its concerns with potential effects of Site C noted above.
- **Role of Natural Gas Requires Careful Consideration:** First Nations are currently experiencing negative impacts of climate change and support efforts and policies to stabilize and reduce greenhouse gas emissions. However, natural gas generation may still have a role to play in long-term energy planning. For example, planning to include natural gas based resources, to

⁴ Manitoba Hydro's 2008 Capital Expenditure Forecast included capital cost estimates of \$3.7 billion for Keeyask and \$5.0 billion for Conawapa. The 2010 capital cost estimates are \$5.6 billion for Keeyask and \$7.8 billion for Conawapa. Both the 2008 and 2010 capital expenditure forecasts are available at http://www.hydro.mb.ca/regulatory_affairs/electric/gra_2010_2012/index.shtml

be used particularly during infrequent low-water years, may provide cost-benefits and improve reliability and energy security. Natural gas may also have a role in helping to displace electricity that is currently imported from other jurisdictions that primarily use coal for generation. These potential benefits need to be weighed against the greenhouse gas and potential environmental implications. To date, insufficient information has been produced on the trade-offs involved to allow for informed decision making.

ELECTRIFICATION

Issue Summary

The provincial government has set targets to reduce greenhouse gas emissions in the future. One way to help reduce greenhouse gas emissions involves switching from non-renewable energy sources (such as fossil fuels used for transportation) to electric energy provided by clean and renewable generation sources. **BC Hydro refers to this process as “electrification” or “fuel switching”.** One of the objectives of the Clean Energy Act is to encourage switching energy sources to decrease greenhouse gas emissions in British Columbia.

Places where it might be possible to reduce greenhouse gas emissions by substituting renewable electricity sources for fossil fuels include:

- **Transportation:** Replacing gasoline and diesel fuelled vehicles with electric vehicles.
- **Space Heating:** Using air and ground heat pumps to replace oil or natural gas heat.
- **Industry:** Using electricity to run compressors instead of natural gas or other industrial uses.

Currently, BC Hydro plans to meet electricity needs that include naturally occurring electrification. However, BC Hydro does not actively promote fuel switching. In the future, BC Hydro could work to promote and encourage electrification to reduce greenhouse gas emissions. As part of this proactive approach BC Hydro could support the development of electric vehicle charging stations and expand transmission and distribution systems to encourage new customers and uses of electricity.

A proactive approach to electrification could help achieve reductions to provincial greenhouse gas emissions. However, fuel switching from fossil fuels to electricity would require additional renewable electricity generation sources and likely additional transmission. The need for additional generation and transmission resources may increase electricity rates.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Electrification of Remote Communities:** Electrification should include extending BC Hydro grid service to remote communities as a priority. In particular those communities currently served by diesel or non-renewable generation.
- **Greenhouse Gas Benefits need to be Weighed Against Other Environmental Impacts:** First Nations are supportive of actions that reduce greenhouse gas emissions. However, increased electricity generation and transmission projects involve their own environmental impacts. The potential greenhouse gas benefits need to be weighed against these environmental impacts.

TRANSMISSION PLANNING

Issue Summary

BC Hydro's IRP also includes a description of transmission infrastructure that will be required over the next 30 years. BC Hydro has noted a concern about the ability to develop the required transmission facilities in a timely way. BC Hydro notes transmission planning needs to consider:

- The need to maintain a high standard of reliability for customers.
- Load growth at a regional level (to ensure there is sufficient transmission in place to serve future growth).
- Potential location of future generation resources (to ensure future generation resources can be connected to the provincial grid).
- Minimizing line losses that occur when electricity is transmitted over large distances.
- The need to replace or refurbish existing transmission facilities that are nearing the end of their useful life.
- Potential for transmission lines to spur regional economic development.
- Potential cost savings and environmental benefits from avoiding multiple transmission lines.
- Potential to facilitate electrification or fuel switching.

BC Hydro can choose to address transmission planning on a reactive basis (i.e. responding to needs as they arise) or a proactive basis (i.e. building transmission facilities based on responding to development potential rather than in response to specific projects or developments). BC Hydro indicates that the following trade-offs of a primarily proactive approach need to be considered:

- **Higher Short-Term Cost:** A primarily proactive approach would involve building transmission infrastructure in advance of the need for the project. In the longer-term though costs could be lower as new generation and loads are developed.
- **Higher Investment Risk:** A primarily proactive approach may increase the risk that assets are built and not fully used or required, particularly if forecast generation or load requirements aren't developed.
- **Potential to Reduce Environmental Impacts:** A coordinated proactive planning approach may reduce the footprint of transmission projects.
- **May Facilitate Economic Development:** Improving access to electricity in some regions may enable economic development that would not otherwise be possible.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Transmission Planning must be Coordinated with Local and Regional Development Plans:** A proactive approach to transmission planning may provide benefits to local regions and communities by reducing costs in the long-term, reducing environmental impacts associated with transmission developments and supporting local and regional economic development. However, for this planning approach to be successful it must be conducted in partnership with First Nations and local communities.
- **Isolated Communities should be Priority:** At present, many First Nation and rural communities are isolated from the provincial electricity grid. Isolated communities, in particular those currently served by diesel generation, should be a priority for new transmission access in order to ensure the economic benefits of clean, low-cost electricity are provided to all communities in the province.

EXPORT MARKET POTENTIAL

Issue Summary

The Clean Energy Act requires BC Hydro to explore whether there is the potential for BC Hydro to acquire additional renewable generation, beyond the needs of communities and businesses in British Columbia, in order to serve export markets and customers in other jurisdictions. The Clean Energy Act also requires that ratepayers in the province not bear any negative rate impacts as a result of additional electricity acquired for export. BC Hydro notes the following factors that would need to be considered:

- This approach would lead to increased development of electricity generation and transmission in the province. Environmental impacts associated with these projects would occur in British Columbia instead of other jurisdictions.
- Potential economic benefits (jobs and investments in IPPs) for local communities and regions.
- Additional revenue from exports would flow to the Province.

Key Comments/Recommendations

Based on the information provided to the TAC to date, the FNEMC provides the following comments:

- **Clean Energy Act Requirements Already Ensure Substantial Energy Available for Export:** As a result of implementing the planning requirements contained in the Clean Energy Act, BC Hydro will already have a substantial amount of clean and renewable electricity available for export in most years. Despite this amount of energy being available for export, BC Hydro is projecting substantial rate increase requirements over the next several years. It is difficult to understand how a case could be made that acquiring additional electricity resources to serve the export market could result in economic benefits to British Columbia.
- **Domestic and Export Markets Require Different Policy Context:** In the FNEMC's view development of energy resources to support local communities and businesses is a different policy concept than the development of energy resources for sale to customers in other jurisdictions. Local First Nations and communities should not be asked to bear increased environmental impacts to serve customers in other jurisdictions without ensuring the local communities and regions benefit substantially from these developments. The concept that the economic benefits would flow primarily to the provincial government is not acceptable.

TECHNICAL ADVISORY COMMITTEE MEMBER

COMMENTS ON BC HYDRO'S

DRAFT INTEGRATED RESOURCE PLAN

Prepared on behalf of the First Nations Energy and Mining Council

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	CONSERVE MORE	2
2.1	ISSUE SUMMARY	2
2.1.1	Comments on BC Hydro Recommendations	3
2.1.2	Other Comments	5
3.0	BUILD AND REINVEST MORE.....	5
3.1	ISSUE SUMMARY	5
3.1.1	Comments on BC Hydro Recommendations	6
4.0	BUY MORE	8
4.1	ISSUE SUMMARY	8
4.1.1	Comments on BC Hydro Recommendations	9
5.0	PREPARE FOR POTENTIALLY GREATER DEMAND.....	10
5.1	ISSUE SUMMARY	10
5.1.1	Comments on BC Hydro Recommendations	12
6.0	COMMENTS ON PROCESS AND NEXT STEPS	14

LIST OF TABLES

Table 1: Energy and Capacity Deficits 2011 Mid-load Forecast After DSM with Existing, Committed and Planned Resources.....	5
Table 2: Energy and Capacity Deficits High Mining Load and LNG3 Load Scenario.....	11
Table 3: Energy and Capacity Deficits Integration of Fort Nelson and Electrification of Horn River Basin	11
Table 4: Illustrative Energy and Capacity Deficits Combined High Mining, LNG3 and Electrification of Horn River Basin.....	11

1.0 INTRODUCTION

This document summarizes comments of InterGroup Consultants Ltd. on BC Hydro's Draft Integrated Resource Plan (IRP). InterGroup participated as members of the Technical Advisory Committee for BC Hydro's IRP on behalf of the First Nations Energy and Mining Council (FNEMC). Comments reflect the review of the draft IRP and information presented to TAC members.

The IRP is BC Hydro's plan for obtaining the resources necessary to meet provincial electricity requirements for the next 20 years. Specific objectives for the IRP are set out in the *Clean Energy Act*. The Act requires BC Hydro to complete its IRP and submit it to the provincial government before the end of 2012. The IRP review process was delayed from its original schedule due to a provincial government review of BC Hydro rates that was announced in April 2011.

The IRP includes several components:

- A load forecast, which estimates how much electricity British Columbia will require over the next 20 years.
- Conservation initiatives that BC Hydro could pursue with its customers in order to reduce the amount of electricity that must be supplied.
- An evaluation of generation and transmission resources that could be acquired in order to meet the gap between existing resources and those required to serve future load growth.

BC Hydro examines each of these components under different potential future market scenarios, for example high or low future economic growth. Potential generation and transmission resources are evaluated across different indicators (or attributes) including cost, environmental impacts and economic benefits. The IRP concludes with several recommendations and actions for BC Hydro to pursue.

As part of the IRP process, BC Hydro established a Technical Advisory Committee (TAC). The purpose of the TAC was to provide ongoing feedback and expert advice to BC Hydro during the development of the IRP. BC Hydro has committed to considering input and advice from TAC members in developing the IRP. However, the IRP is BC Hydro's document and BC Hydro is not bound by recommendations or advice it receives from TAC members.

BC Hydro requested that the FNEMC participate as a member of the TAC. The FNEMC retained InterGroup Consultants Ltd. to participate on the FNEMC's behalf and to provide the FNEMC with a summary of comments and analysis following each TAC meeting. TAC meetings were held on December 14, 2010; January 27-28, 2011; February 14, 2011; April 5-6, 2011; February 28-29 2012; and June 18 2012. A draft of the IRP was prepared and circulated to TAC members in May 2012.

BC Hydro has requested that TAC participants provide public comments on the draft IRP. BC Hydro's draft IRP contains fourteen recommendations organized in four topic areas. BC Hydro has also provided a consultation feedback form with questions on each topic area. This document summarizes the comments of InterGroup Consultants on the four topic areas from a TAC participation perspective.

2.0 CONSERVE MORE

2.1 ISSUE SUMMARY

As part of the IRP process, BC Hydro prepared two mid-level 2011 load forecasts, one that includes what BC Hydro terms "initial LNG"¹ and one that excludes initial LNG. BC Hydro's IRP notes that a key objective of the *Clean Energy Act* is to reduce the expected increase in demand by 66 per cent by 2020. These reductions in forecast demand growth would be achieved through conservation programs or demand side management (DSM).

Conservation methods can take many forms: providing assistance to customers to purchase more efficient appliances and equipment; electricity rates that are designed to let customers know the full cost of electricity use and working with government to require higher energy efficiency standards for buildings and electrical equipment. BC Hydro's Draft IRP provides a description of five sets of options for conservation of energy that represent different approaches or packages of conservation options². These options include: a slowing down of BC Hydro's current conservation planning (Option 1); maintaining the current conservation planning (Option 2); expanding efforts on current programs (Option 3); adding additional conservation programs (Option 4); and a fundamental shift in BC Hydro's conservation approach that emphasizes changes to market parameters and societal norms.

BC Hydro notes the DSM regulation directs the BCUC to use the Total Resource Cost (TRC) test to determine the cost-effectiveness of DSM options and prescribes certain elements of the TRC calculation. BC Hydro describes some concerns with elements of the TRC calculation and provides three versions of the calculation in the IRP: DSM gross cost per unit of energy savings; DSM net costs per unit of energy savings as estimated by BCH; DSM net costs per unit of energy savings using the methods prescribed in the DSM regulation.

The information provided by BCH in the IRP indicates that the gross costs of DSM programs for each of the five options range from a low of approximately \$35/MWh (Option 1) to a high of approximately \$50/MWh (Option 5). In all cases these average costs per MWh are substantially lower than BC Hydro's estimate of the long-run marginal cost of new renewable supply (\$129/MWh). Using either of the approaches to estimate the "net cost" of DSM (either BC Hydro's approach or the approach prescribed in the DSM regulation) substantially reduces the cost estimates of DSM programming and therefore makes DSM programming appear even more cost effective relative to acquiring new renewable generation resources³.

On the surface, the gap between the marginal cost of DSM programs (\$35-\$50/MW.h) and the marginal cost of acquiring new renewable generation resources (\$129/MW.h) suggests there is substantial room

¹ The Douglas Channel and Kitimat LNG facilities. BC Hydro notes these facilities have obtained material government agency approvals including NEB export licenses and environmental assessment approvals. Further these facilities have requested service from BC Hydro. Page 2-2, BC Hydro Draft Integrated Resource Plan. May 2012.

² These are summarized in section 3.3 of the Draft IRP.

³ Refer to pages 6-29 through 6-31 of the Draft IRP.

for BC Hydro to invest in even more aggressive DSM spending at a lower cost than acquiring new renewable generation. However, BC Hydro also notes in the IRP that:

1. There is a significant degree of uncertainty around a fixed resource plan's ability to hit its forecast targets several years out.
2. A number of elements have been identified as not being captured in the uncertainty quantification. A prudent approach to energy planning suggests that the quantified uncertainty estimates may understate the deliverability risk of DSM.
3. Options 4 and 5 are intrinsically different from Options 1 to 3 and show a substantial but uncertain upside⁴.

BCH's Draft IRP also addresses capacity savings options, beyond the associated capacity benefits typically associated with the energy-focussed DSM options described above: industrial load curtailment and capacity focussed programs. BC Hydro notes these options represent its first major exploration of capacity-focussed DSM and as a result experience will be required to increase the certainty of potential or expected capacity savings associated with these programs.

2.1.1 Comments on BC Hydro Recommendations

Recommendation #1: Pursue DSM Option 3 and increase energy savings targets to 9,800 GW.h/year by F2021 (1,000 GW.h/year more than the current plan) through conservation and efficiency programs, incentives and regulations.

BC Hydro states that Option 3 would deliver electricity savings at an average unit net cost of less than \$10/MWh compared to the average cost of new supply at \$129/MWh. BC Hydro indicates it prefers Option 3 in part due to additional deliverability risks associated with Options 4 and 5. BC Hydro notes a key objective of the *Clean Energy Act* is the reduction of future demand by 66 percent. BC Hydro notes that Option 3 achieves 78 percent reduction in future demand for the consideration of Initial LNG, but only 58 percent after initial LNG is included⁵.

Based on the gross TRC information provided by BC Hydro in the draft IRP, it appears that the recommendation to pursue DSM Option 3 is reasonable and cost-effective relative to acquiring new renewable sources of supply. Other observations and comments include:

- The marginal cost gap between the gross cost of DSM and the marginal cost of acquiring new supply is large. BC Hydro notes there is uncertainty in the deliverability of DSM savings and that its recommendation is prudent. However, there are risks that BC Hydro's proposal will not maximize the potential cost advantages of DSM relative to new generation supply. BC Hydro should continue to monitor the costs and deliverability of DSM programs to ensure it has maximized its conservation potential.

⁴ Pages 6-38 to 6-39. BC Hydro Draft Integrated Resource Plan. May 2012.

⁵ Pages 9-28 to 9-29. BC Hydro Draft Integrated Resource Plan. May 2012.

- Access to DSM programming continues to be an issue for many First Nations. BC Hydro should ensure its DSM programs include options and programs that are accessible and appropriate for First Nations. This is particularly important for remote communities where the marginal cost of generation is substantially higher than on the integrated electricity system.

Recommendation #2: Advance DSM Options 4 & 5. Explore more codes, standards, and rate options for savings beyond the 9,800 GW.h/year target. This action supports the recently introduced Bill 32 (*Energy and Water Efficiency Act*).

BC Hydro's portfolio analysis indicates that Options 4 and 5 have the potential to deliver additional energy savings that are cost-effective. However, BC Hydro also notes these two options represent an intrinsically different approach to DSM from existing programs. BC Hydro also notes deliverability is an important consideration in recommending a DSM approach in a resource plan⁶. There appears to be merit in BC Hydro's recommendation to explore these DSM options.

Recommendation #3: Pursue voluntary capacity-focused conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

BC Hydro's load-resource balance indicates a capacity deficit in the mid-gap load resource balance beginning in approximately 2016 or 2017. A capacity gap of some degree⁷ persists throughout the forecast period even after adjustments to acknowledge the potential additional capacity benefits of DSM option 3, Site C and additional renewable IPP generation⁸. BC Hydro has provided analysis that industrial load curtailment and capacity focused DSM programs could provide between 400 to 500 MW of capacity benefits to address this deficit at costs that are lower than costs associated with gas-fired generation or pumped storage (the marginal supply side capacity resources that might otherwise be used to address this deficit).

Based on the information provided, BC Hydro's recommendation seems reasonable. Other observations and comments include:

- The voluntary nature of these programs is important. BC Hydro should focus on developing and implementing voluntary programs and rate options that share the benefits of cost savings with customers that choose to participate.
- As with the energy focused DSM programs, access to these programs is important. BC Hydro should ensure cost-effective capacity reduction programs are accessible in First Nations communities as well as to residential, commercial and industrial customers.

⁶ Pages 6-38 to 6-39. BC Hydro Draft Integrated Resource Plan. May 2012.

⁷ Approximately 1,000 MW by fiscal 2021, decreasing to approximately 200MW by fiscal 2022 once Site C comes in to service. Page 6-136. BC Hydro Draft Integrated Resource Plan. May 2012.

⁸ Refer to Figure 6-28 on page 6-136 of BC Hydro Draft Integrated Resource Plan. May 2012.

2.1.2 Other Comments

In addition to the specific comments on BC Hydro’s recommendations, the following comments and observations on conservation programming are noted:

- **Access to Conservation Initiatives:** Access to DSM/Conservation initiatives is a challenge for many First Nation communities – particularly those in rural and remote locations. BC Hydro needs to ensure its DSM programs are accessible and available to all First Nations communities. Relevant considerations in this regard include:
 - In First Nations communities housing costs and electricity bills may be paid by the Band and not the individual or family residing in the home. Therefore conservation programs involving financial incentives/assistance for repairs and upgrades or reduced electricity bills may not be as effective as in other communities.
 - Access to capital dollars for repairs and improvements to community facilities (both residential and commercial) may be limited compared to other communities.
 - Codes and standards applicable in First Nations communities may differ from provincial standards.

- **Funding for First Nation Community Energy Managers:** In recognition of the specific challenges associated with conservation/DSM initiatives in First Nations communities, BC Hydro and the Province of British Columbia should provide capacity funding for energy managers to support energy conservation in First Nations communities.

3.0 BUILD AND REINVEST MORE

3.1 ISSUE SUMMARY

BC Hydro’s mid-2011 load forecast shows material energy and capacity deficits beginning in approximately F2017, assuming the initial LNG developments proceed and current DSM programs continue. The energy and capacity deficits are summarized in Table 1.

**Table 1:
Energy and Capacity Deficits 2011 Mid-load Forecast After DSM
with Existing, Committed and Planned Resources⁹**

	F2017	F2021	F2026	F2031
Energy Deficit (GW.h)	-761	-4,935	-7,367	-12,478
Capacity Deficit (MW)	-935	-1,167	-1,697	-2,436

⁹ Pages 2-31 and 2-32. BC Hydro Draft Integrated Resource Plan. May 2012.

These deficits can be reduced to some degree with increased conservation initiatives. However, the mid-scenario energy and capacity gaps will still require BC Hydro to acquire additional supply by 2017¹⁰.

BC Hydro's resource planning and optimization analysis indicates that Site C would be selected as a cost-competitive resource at its earliest available in-service date in all market scenarios for the high-gap and mid-gap load resource balances. For the small-gap resource balance, Site C is not selected as a cost-competitive resource until later in the planning period in three market scenarios. In the other two market scenarios Site C is not selected at all during the planning horizon for the small-gap resource balance.

BC Hydro's analysis concludes that Site C continues to be a cost-effective resource compared to other clean resource options¹¹. BC Hydro further notes that Site C provides other ancillary benefits including additional shaping and firming capability for new wind resources¹².

BC Hydro also notes the presence of capacity deficits throughout the planning period. While Site C and increased DSM can address some of these gaps, there remains a need for BC Hydro to acquire additional capacity resources. BC Hydro's IRP sets out several options for building additional capacity in its integrated system.

3.1.1 Comments on BC Hydro Recommendations

Recommendation #4: Build Site C to add 5,100 GW.h/year of annual energy and 1,100 MW of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling of the Crown's duty to consult, and where appropriate, accommodate Aboriginal groups.

BC Hydro's IRP highlights the considerable energy and capacity deficits the utility will be facing in the next five to ten years. Site C is recommended by BC Hydro as a cost effective generation resource that helps address these gaps. BC Hydro provides a high level preliminary discussion of environmental and economic attributes of the project but these project attributes do not appear to materially influence the selection of Site C as a preferred resource. BC Hydro notes that Site C is currently in an environmental and regulatory review process¹³.

Site C has been studied considerably more than other potential resource options. It has also already received attention from legislators and regulators (including being exempted from the requirement for a certificate of public convenience and necessity under the *Clean Energy Act*). The degree to which Site C has already been advanced highlights several challenges associated with the IRP process:

- Site C is a specific resource opportunity, while other resource options examined in the IRP are only portfolios of potential projects, they do not represent site-specific project opportunities. As a result,

¹⁰ In the event Initial LNG loads do not materialize, the mid-gap scenario shows surplus energy available until at least F2021. Capacity deficits would be reduced, but not eliminated, in the event initial LNG loads do not materialize.

¹¹ Page 6-50. BC Hydro Draft Integrated Resource Plan. May 2012.

¹² Page 9-38. BC Hydro Draft Integrated Resource Plan. May 2012.

¹³ Page 9-39. BC Hydro Draft Integrated Resource Plan. May 2012.

there is generally a better ability to model the costs and potential effects of Site C relative to other opportunities.

- Site C occurs at a scale and involves an intensity of local and regional environmental effects that is dramatically different than other resource portfolios. The high level environmental attribute screening undertaken in the IRP does not satisfactorily address these differences in scale and intensity of effects.

Based on the information provided to the TAC the following additional comments related to Site C are provided:

- **Conflicts between provincial level planning and regional/local environmental impacts:** Site C highlights the conflict between provincial level energy planning and regional environmental impacts. In order to develop Site C, local First Nations and communities would be asked to bear significant impacts on lands and water. No decisions or plans to advance Site C should be made without meaningful consultation and accommodation with First Nations whose lands and waters would be impacted. The Green Energy Advisory Task Force Report similarly highlighted this issue and recommended the establishment of regional clean energy planning processes.
- **Full impacts of development must be understood:** The environmental attribute analysis in BC Hydro's IRP does not adequately consider the intensity of the effects associated with Site C.
- **Benefits must be shared:** If new projects, including Site C, can be developed in a manner that is acceptable to the impacted First Nations and communities, mechanisms must be in place to ensure the economic benefits of the project are shared fairly with the local communities. Benefit sharing must extend beyond simply offering short-term construction-related employment to local residents. Revenue sharing and project ownership must be included as benefits for local First Nations and communities. Best practices from other Canadian jurisdictions should be reviewed and incorporated into project planning and development¹⁴.

Recommendation #5: Develop Revelstoke Unit 6. Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by F2019, adding 500 MW of peak capacity to the BC Hydro system.

and

Recommendation #7: Investigate and Advance Additional Resource Smart Projects. Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining, untapped capacity within BC Hydro's existing hydroelectric system.

BC Hydro's draft IRP indicates there is a significant need for additional capacity throughout the planning period. To the extent this capacity need can be addressed by additional development at existing facilities

¹⁴ As an example, the Nisichawayasihk Cree Nation participation in the Wuskwatim generation project in Manitoba and the proposed Keeyask Generating Station project in Manitoba.

(presuming associated cost benefits and reduced environmental impacts relative to new developments) these recommendations seem prudent and reasonable.

Recommendation #6: Bridging Capacity from Existing Resources. Fill the short-term peak capacity gap from F2016 to F2021 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing back-up use of Burrard Thermal Generating Station, if required and as authorized by regulation.

BC Hydro indicates there are minimal costs associated with maintaining access to capacity through market transactions and the Columbia River Treaty. BC Hydro indicates it would only rely upon Burrard after the market and Columbia River Treaty options. BC Hydro also indicates these options reflect material cost savings relative to developing natural gas fired generation for capacity purposes¹⁵. BC Hydro’s recommendation appears reasonable given the cost advantages and concerns about the short-term deliverability of other capacity options.

Recommendation #8: North Coast Transmission Upgrade. Reinforce the existing 500kV line from Prince George (Williston Substation) to Terrace (Skeena Substation) to meet new demand on the North Coast.

BC Hydro indicates this project is required by F2016 in order to meet the requirements of the initial LNG facilities¹⁶. BC Hydro states initial scoping is complete and consultations with First Nations and stakeholders are underway. The project appears prudent from a planning perspective, subject to BC Hydro obtaining the necessary environmental and other regulatory approvals.

4.0 BUY MORE

4.1 ISSUE SUMMARY

BCH’s Draft IRP indicates that under the mid-Gap and Large-Gap scenarios there are energy supply deficits beginning in F2017 even after pursuing DSM Option 3. The energy deficits in the mid-Gap scenario increase to approximately 3,500 GW.h/year until the addition of Site C in the F2022 time-frame. Even with the addition of Site C, the energy deficits in the Mid-Gap scenario grow to approximately 2,000GW.h by approximately F2025 and 6,000 GW.h by F2031¹⁷.

BC Hydro states that IPP generation is the “swing resource” used to address these energy deficits¹⁸. However, BC Hydro also notes that if the short-term energy gap between F2017 and F2022 is filled by long-term IPP contracts, there will be surplus energy once Site C comes into service. BC Hydro notes that an approach that meets the 2017-2022 energy gap using a mix of IPP contracts and reliance on market purchases can meet energy requirements at a lower cost while providing the required reliability. However

¹⁵ Page 9-47. BC Hydro Draft Integrated Resource Plan. May 2012.

¹⁶ Page 9-51. BC Hydro Draft Integrated Resource Plan. May 2012.

¹⁷ Figure 6-19. BC Hydro Draft Integrated Resource Plan. May 2012.

¹⁸ Page 6-86. BC Hydro Draft Integrated Resource Plan. May 2012.

BC Hydro notes that this approach would not meet self-sufficiency requirements for a two or three year period¹⁹.

With respect to the IPP procurement process, BC Hydro notes that in 2010 it retained a consultant to undertake an independent review of BC Hydro's procurement practices. Recommendations made by that consultant included:

- Link the IRP process and procurement activities (i.e. the timing and level of need for new resources should be determined through the IRP process).
- Make the energy procurement process more transparent for all stakeholders.
- Implement smaller but more frequent energy procurements in the future²⁰.

BC Hydro notes the on-going risk that loads will either grow more slowly or more quickly than currently anticipated. In particular, load risks related to LNG developments could substantially affect BC Hydro's future generation requirements.

With respect to capacity requirements, BC Hydro has noted an additional need for both long-term and contingency capacity²¹. BC Hydro notes that natural gas generation is often used as a low-cost source of additional capacity. However, there are policy implications of relying on natural gas-fired generation (related to the clean energy targets). Therefore BC Hydro recommends additional consideration of other capacity options including pumped storage.

4.1.1 Comments on BC Hydro Recommendations

Recommendation #9: Develop 2,000 GW.h/year Clean Procurement Option. Design an energy procurement process to acquire about 2,000 GW.h/year from clean energy producers from projects that would come into service in the F2017 to F2019 timeframe.

BC Hydro notes that using a mixture of IPP resources and market purchases reduces the cost to ratepayers (relative to addressing the short-term energy gap entirely with IPP contracted energy) by approximately \$350 million (PV)²². This is a considerable cost saving and appears prudent, despite the potential policy concerns related to not meeting the self-sufficiency target in the short-term. BC Hydro's proposed approach should be considered in the context of the substantial rate pressures currently experienced by customers (which will only increase with future load growth).

¹⁹ Page 6-91. BC Hydro Draft Integrated Resource Plan. May 2012.

²⁰ Final Report on BC Hydro's Energy Procurement Practices. Merrimack Energy Group. 2011.

²¹ Page 9-60. BC Hydro Draft Integrated Resource Plan. May 2012.

²² Page 6-91. BC Hydro Draft Integrated Resource Plan. May 2012.

In developing its procurement process, BC Hydro should address the findings of the Merrimack report. In particular:

- Reducing the complexity of the bidding process and purchase agreements to permit better access for small-scale power projects.
- Implementing smaller but more frequent procurements to provide more certainty and allow more flexibility for project development.
- Use a mixture of procurement methods.

Similar recommendations were made in the Green Energy Advisory Task Force Report²³. These changes should enhance the ability for First Nations to participate in the BC Hydro energy procurement processes. BC Hydro should also consider adjustments to its procurement processes and energy purchase agreements to accommodate projects in remote non-integrated communities.

Recommendation #10: Explore Pumped Storage capacity options that focus on reducing the lead time to in-service dates and where and how to site future pumped storage in the province, should they be needed.

BC Hydro's Draft IRP notes the need for additional capacity throughout the planning horizon, even with the addition of Site C. Pumped storage may be a feasible source of additional capacity. However, pumped storage represents a new approach to developing capacity resources. BC Hydro has indicated a preference for exploring pumped storage opportunities near existing major load centres (to minimize the need for additional transmission where feasible). BC Hydro estimates it may take 8 to 10 years to fully design, permit and build a large pumped storage facility²⁴. BC Hydro notes a number of potential risks related to the deliverability and future need for pumped storage.

BC Hydro's feasibility assessment of pumped storage projects must consider the compatibility of these potential developments with First Nation land-use plans. BC Hydro's feasibility assessment should also address the potential for First Nation investment in these projects. This will require a collaborative approach with First Nations to ensure these interests are addressed in the planning process.

5.0 PREPARE FOR POTENTIALLY GREATER DEMAND

5.1 ISSUE SUMMARY

BCH's draft IRP examines regional load growth scenarios to assist in understanding the potential implications of large LNG and mining related loads in the North Coast and the integration of Fort Nelson in conjunction with electrification of the Horn River Basin in northeastern BC. Table 2 summarizes the potential energy and capacity deficits assuming expanded LNG and a high mining load scenario. Table 3 summarizes the potential energy and capacity deficits with the integration of Fort Nelson and

²³ In particular, scheduling regular, predictable calls for clean power to create investor certainty.

²⁴ Page 9-61. BC Hydro Draft Integrated Resource Plan. May 2012.

electrification of the Horn River Basin. Table 4 provides an estimate of the combined impact of these scenarios.

**Table 2:
Energy and Capacity Deficits
High Mining Load and LNG3 Load Scenario²⁵**

	F2017	F2021	F2026	F2031
Energy Deficit (GW.h)	-2,292	-16,503	-22,088	-26,996
Capacity Deficit (MW)	-1,212	-2,679	-3,622	-4,335

**Table 3:
Energy and Capacity Deficits
Integration of Fort Nelson and Electrification of Horn River Basin²⁶**

	F2017	F2021	F2026	F2031
Energy Deficit (GW.h)	-659	-6,303	-10,706	-16,688
Capacity Deficit (MW)	-928	-1,365	-2,171	-3,032

**Table 4:
Illustrative Energy and Capacity Deficits
Combined High Mining, LNG3 and Electrification of Horn River Basin²⁷**

	F2017	F2021	F2026	F2031
Energy Deficit (GW.h)	-2,951	-22,806	-32,794	-43,684
Capacity Deficit (MW)	-2,140	-4,044	-5,793	-7,367

These are material resource gaps that would be challenging for BC Hydro to address. Both of these regions are located at the end of radial transmission lines. Therefore, BC Hydro’s draft IRP discusses two broad options to serve these loads if they materialize:

- Integrated system generation resources and additional transmission infrastructure where required; and

²⁵ Page 2-35. BC Hydro Draft Integrated Resource Plan. May 2012.

²⁶ Page 2-39. BC Hydro Draft Integrated Resource Plan. May 2012.

²⁷ These estimates were prepared simply by summing the figures in Table 2 and Table 3.

- Local generation resources (i.e. generation sited near the new loads to reduce transmission requirements).

5.1.1 Comments on BC Hydro Recommendations

Recommendation #11: New Transmission Infrastructure from Peace River to North Coast. Undertake work to maintain the earliest in-service date for a new 500kV transmission line from Prince George to Terrace and Kitimat, and from the Peace River region to Prince George.

BC Hydro identifies three new 500 kV transmission projects that may be required to supply the North Coast region in the event LNG3 and new mining loads materialize:

- A new 500 kV transmission line from Williston substation near Prince George to the Skeena substation near Terrace;
- Two new 500 kV transmission lines from the Skeena substation to a new 500 kV substation near Kitimat; and
- A new 500 kV transmission line from the Peace Region to the Williston substation near Prince George.

BC Hydro notes that these lines would not be required in the event LNG3 loads do not materialize. However, if LNG3 development proceeds, the additional supply may be required by F2020. BC Hydro notes that while it has explored the possibility of local gas-fired supply to serve these loads, for now BC Hydro prefers to keep both supply options available²⁸. Therefore BC Hydro recommends proceeding with the planning and approvals of these projects. BC Hydro notes the work will be undertaken at minimal relative costs and final decisions on the required timing will not be made until F2014 at the earliest once critical milestones for these potential new loads are reached²⁹. BC Hydro's recommendation seems prudent and can be undertaken at minimal cost to ratepayers.

Recommendation #12: Develop Future Acquisitions for LNG3. Develop procurement options for additional clean energy resources, backed-up by gas-fired generation – located either in the North Coast or both in the North Coast and across the province – for energy that could be delivered in the F2020-F2021 timeframe, should it be needed.

and

Recommendation #13: Natural Gas-fired Generation to Provide Contingency Capacity Options. Explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

²⁸ Page 9-65. BC Hydro Draft Integrated Resource Plan. May 2012.

²⁹ Pages 9-66-9-67. BC Hydro Draft Integrated Resource Plan. May 2012.

and

Recommendation #14: Monitor Fort Nelson/Horn River Basin Load and Supply. Continue to monitor the northeast natural gas industry and undertake studies to keep open electricity supply options, including transmission connection to the integrated system and local gas-fired generation.

BC Hydro recommends designing a procurement process, at an expected cost of approximately \$2 million, to deliver adequate volumes of clean energy to meet the potential additional demands of LNG3 loads. BC Hydro notes one of the more probable risks it faces with respect to this recommendation is that it will not be able to generation sufficient interests from potential developers to meet the volume and commercial operation dates required to serve the potential LNG loads. However, BC Hydro is also at risk of making expenditures in advance of the need for new capacity being confirmed³⁰.

BC Hydro also recommends undertaking work to develop natural gas-fired contingency options that focus on reducing the lead-time to in-service dates for these generation options if required³¹. BC Hydro notes there has been little to no greenfield gas generation project development work has occurred in BC in decades and therefore siting of potential gas generation is a substantial issue. BC Hydro estimates the costs associated with this action are approximately \$750,000 in F2013 and F2014³².

Finally, BC Hydro recommends monitoring natural gas industry developments in the Horn River Basin. BC Hydro indicates it is premature to undertake significant supply actions in the near-term, but proposes to undertake studies to keep open supply alternatives including transmission connection to the system and local gas-fired generation. BC Hydro estimates the costs for these actions will be approximately \$2-3 million in the near-term³³.

The potential new LNG developments represent a material load risk to BC Hydro. Acquiring the new generation and transmission infrastructure required to serve these loads would involve substantial costs for all ratepayers as well as environmental effects (related to both generation and transmission resources). The consequences of these potential loads are of sufficient scale to represent a major provincial policy concern, beyond what BC Hydro alone can be expected to address. BC Hydro's recommended actions may be prudent, but will not be sufficient alone to respond to the substantial public policy concerns related to these potential developments.

First Nations are currently experiencing negative impacts of climate change and support efforts and policies to stabilize and reduce greenhouse gas emissions. Natural gas development (including as a fuel for transportation and electricity generation) may have a role to play in long-term provincial energy planning and global greenhouse gas emissions reductions. These potential benefits need to be weighed against the potential environmental implications of evolving gas extraction technologies. Provincial policy directions in this area continue to evolve. BC Hydro needs to be able to contribute to the provincial policy

³⁰ Page 9-70. BC Hydro Draft Integrated Resource Plan. May 2012.

³¹ Page 9-71. BC Hydro Draft Integrated Resource Plan. May 2012.

³² Page 9-73. BC Hydro Draft Integrated Resource Plan. May 2012.

³³ Page 9-75. BC Hydro Draft Integrated Resource Plan. May 2012.

debate through timely and effective communications of the trade-offs in costs and benefits for ratepayers of pursuing expanded natural gas development.

6.0 COMMENTS ON PROCESS AND NEXT STEPS

BC Hydro's plan includes a chapter on consultation activities (Chapter 8), though in the draft plan only a brief outline of consultation activities is provided and summaries of inputs received to date are noted. In the final version of the IRP, BC Hydro should, at a minimum, provide a summary of the comments received, and indicate how these comments were addressed in the final IRP. BC Hydro is not obligated to comply with every request or comment received, but at a minimum should acknowledge the comments received and indicate when such comments could not be addressed.

BC Hydro provided a draft copy of the IRP in May 2012 and has requested comments from TAC participants by early August 2012. BC Hydro is required to file the completed IRP with the provincial government by late 2012. BC Hydro's proposed steps to finalize the IRP and incorporate final comments received from the TAC, First Nations, the public and stakeholders is not defined. BC Hydro should provide IRP participants with a timeline showing the anticipated steps between the submission of final comments and BC Hydro's submission of the final IRP to the provincial government.

Finally, BC Hydro's draft IRP states BC Hydro seeks approval from the B.C. Lieutenant Governor in Council pursuant to subsection 4(1)(a) of the *Clean Energy Act*. Section 4 (1)(a) of the *Clean Energy Act* provides that the Lieutenant Governor in Council may, by order, approve or reject the plan. However, the review process contemplated by the province, and the decisions or actions that may flow from any approvals are not clear. BC Hydro and the provincial government should provide timelines for review of the IRP and clearly communicate to the public and participants in the IRP process, the decisions and actions that will follow approval of the IRP.

Appendix 18 — Written Comments Received by Letter & Email

James, Loretta

From: Liliane Squinas [lsquinas@lhooskuz.com]
Sent: 2011, March 15 1:22 PM
To: 2011 IRP
Subject: RE: Integrated Resource Plan - Prince George Registration

Loretta:

I am withdrawing my registration to attend this workshop on March 17th in Prince George. I got information that BC Hydro is considering this workshop as "consultation". Consultation process has to be more meaningful rather than lumping it into a workshop procedure.

Chief Liliane Squinas, BMgt
Lhoosk'uz Dene Nation

-----Original Message-----

From: 2011 IRP [mailto:2011IRP@bchydro.com]
Sent: Friday, March 04, 2011 11:19 AM
To: Liliane Squinas
Subject: Integrated Resource Plan - Prince George Registration

Hi Liliane,

Thank you for your registration to attend the upcoming First Nations workshop March 17th in Prince George.

We look forward to seeing you there.

Loretta James
BC Hydro, Aboriginal Relations & Negotiations Integrated Resource Plan
6911 Southpoint Drive
Burnaby, BC V3N 4X8
t. 1.866.461.0161 x 3 f. 604.528.2822

-----Original Message-----

From: Liliane Squinas [mailto:lsquinas@lhooskuz.com]
Sent: 2011, March 04 11:14 AM
To: 2011 IRP
Subject: FW: Scanned image from AR-M257

Please see attached registration for the Prince George Workshop.
Liliane

-----Original Message-----

From: noreply@telus.net [mailto:noreply@telus.net]
Sent: Friday, March 04, 2011 2:59 AM
To: lsquinas@lhooskuz.com
Subject: Scanned image from AR-M257

DEVICE NAME:
DEVICE MODEL: SHARP AR-M257
LOCATION:

FILE FORMAT: PDF
RESOLUTION: 300dpi

Attached file is scanned image in PDF format.
This file can be read by Adobe Acrobat Reader.
The reader can be downloaded from the following URL:

<http://www.adobe.com/>



OFFICE OF THE CHIEF

200 – 355 Yellowhead Highway, Kamloops, B.C. V2H 1H1

Phone #: (250) 828-9700, Fax #: (250) 372-8833

Web Site: www.kib.ca

March 21, 2011

Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

Re: BC Hydro's Integrated Resource Plan

Charlie Weiler,

We received your invitation to the recent Integrated Resource Plan session that was held in March, 2011 looking for our input as First Nations.

We are interested in meeting with BC Hydro directly to provide our input and discuss how our interests relate to this plan. We would like to sit down as a Council to discuss our interests in relation to the proposed BC Hydro Integrated Resource Plan.

We would like to invite you to attend a Chief & Council meeting to receive our feedback and discuss the Tk'emlúps Indian Band's interests in person with a blanket discussion. It is part of Tk'emlúps Indian Band's customs and protocols to have you sit down with us as a whole.

We hold our Council meeting's weekly. Please feel free to contact our Executive Secretary, Maureen Frank-Cramer to set up a time that is convenient for you. She can be reached at 250-828-9569 or via email at Maureen.frank-cramer@kib.ca.

We look forward to hearing back from you and moving forward together on this plan.

Sincerely,
TK'EMLÚPS INDIAN BAND

CHIEF Shane Gottfriedson
ON BEHALF OF COUNCIL



Treaty 8 Tribal Association

10233 – 100th Avenue, Fort St. John, BC, V1J 1Y8

Phone: (250) 785-0612 Fax: (250) 785-9800 or 785-2021

Website: www.treaty8.bc.ca

April 29, 2011

Mr. Charlie Weiler
BC Hydro, Aboriginal Relations & Negotiations
6911 Southpoint Drive, 10th Floor
Burnaby, BC V3N 4X8
Fax: 604-528-2822

Re: Consultation with Treaty 8 concerning the Integrated Resource Plan

Dear Mr. Weiler,

Thank you for your letter of March 14, 2011 concerning BC Hydro's Integrated Resource Plan (IRP), including input received to date concerning First Nation consultations in relation to the IRP. Further to our discussions of February 25, the information session hosted by BC Hydro in Fort St. John on March 16, and the summary of that session made available on April 8, we are writing to provide BC Hydro with our concerns and suggestions respecting consultation with Doig River, Halfway River, Prophet River and West Moberly First Nations concerning the IRP, and comments regarding the IRP process to date.

Consultation to Date

Workshops. As indicated in your letter and in the materials filed in relation to the IRP, BC Hydro initially proposed a process for consultation with First Nations consisting essentially of two rounds of information workshops to be held throughout the Province. The first of these workshops in Treaty 8 territory occurred on March 16 in Fort St. John, and provided

information respecting the development of the IRP to date, and related topics. The second workshop is planned for September 2011 in relation to a draft of the IRP to be prepared this summer.

Consultation Suggestions Ignored. On September 24, 2010, BC Hydro held a workshop to solicit input from seven (7) First Nation representatives concerning the IRP consultation process.

Those First Nation representatives made several constructive suggestions concerning consultation, including the following which were not implemented by BC Hydro:

- Broaden the consultation beyond two sets of workshops;
- Hold a political level meeting between BC Hydro executives, the Provincial Minister and the Chiefs;
- Hold additional meetings to brief First Nations in advance of the workshops;
- Hold additional preliminary workshops in November 2010; and
- Provide funding for technical experts trusted by First Nations to explain the supply and demand-side resource options.

Inadequate time for Consultation. In general, the timeframe for finalization of the IRP is not conducive to adequate consultation with potentially-affected First Nations. This is particularly the case since the T8FNs were not notified until late January 2011 of the IRP process. This issue has been raised throughout the process to date and was re-iterated during the recent workshop in Fort St. John.

First Nation Issues not Properly Scoped. One of the initial questions of First Nation participants asks them to consider “the most important issues to be identified by First Nations in the development of the Integrated Resource Plan”. This is not proper issues scoping and amounts to a survey of 7 members of all the First Nations in the Province.

Consultation not commensurate with Potential Impacts. Once the level of demand-side management is determined, BC Hydro intends to fill the remaining electricity gap using the following supply-side options: Resource Smart¹, Site C, and future power calls. Site C is the only project specifically contemplated in the process, and so potentially affected Treaty 8 First Nations should have been consulted directly from the outset and not merely as “other First

¹ Resource Smart involves improvements to efficiency, capacity and design at existing generation and transmission facilities

Nations in British Columbia". The "same" consultation is not "equivalent" consultation when the courts have clearly stated that deeper consultation is required based on the nature of the potential infringement on Section 35(1) Rights.

Capacity Funding. The level of capacity funding offered to First Nations is not going to result in meaningful consultation. The commitment of limited resources today will result in the creation and continuation of conflicts tomorrow.

Inadequate Consultation Plan. Overall, the two sets of workshops and the actions proposed by BC Hydro do not amount to adequate consultation with our First Nations. This is especially the case considering the implications of the outcomes of the IRP process for potential hydroelectric development on the Peace River.

Prejudice in Favour of Site C

Clean Energy Act. In addition to the inadequacies in the consultation process, our First Nations were also not consulted on the development of the *Clean Energy Act*. This fact is relevant because of the severe restrictions put in place by the *Act* that limit the consideration or development of feasible alternatives to Site C. The *Act* is designed such that inclusion of Site C within the preferred portfolio to meet the potential future electricity needs of the Province is almost inevitable.

We note, for example, that all of the large-scale hydro-electric projects contemplated in the 2008 Long-term Acquisition Plan (LTAP) have been excluded from further consideration in Schedule 2 of the *Act*. In addition, section 3(5) of the *Act* requires that BC Hydro must plan to rely on no energy and no capacity from the existing Burrard natural gas facility, except in the case of emergency or as authorized by regulation.

The requirements of the *Clean Energy Act* also result in an annual oversupply of energy of 8000 MWh beyond 2016, which is double the potential annual production of Site C. This unnecessary excess energy requirement creates an artificial "need" for more electricity. The resulting surplus will simply be dumped on the electricity market at whatever price is available. Market clearing prices are low and expected to remain that way for the foreseeable future.

IRP Process. In reviewing the materials available on the BC Hydro website, Treaty 8 was somewhat surprised to learn that the IRP process was underway for several months prior to receipt of our first notification in late February 2011. During that time, the following activities took place without any consultation with our First Nations:

- September 14, 2010 – Workshop to Discuss 2010 Resource Options Update
- September 24, 2010 – Workshop to Discuss First Nations Consultation
- December 8, 2010 – Workshop to Discuss 2010 Resource Options Update
- December 14, 2010 – Technical Advisory Committee Meeting #1
- January 27-28, 2011 – Technical Advisory Committee Meeting #2
- February 14, 2011 – Technical Advisory Committee Meeting #3

While BC Hydro indicated in several of the IRP documents and stated again in the March 16, 2011 workshop that these actions do “not commit BC Hydro to any particular project”, it is clear that the choices made to date involved excluding certain options from further consideration. In our view, these previous actions prejudice the process in favour of selection of a portfolio that includes the development of the Site C Project.

One striking example concerns the information used during the Resource Options Update in relation to potential hydroelectric developments on the Peace River. A review of the Draft Resource Options Update (ROU) Report and associated Appendix indicates the following:

- The installed capacity of Province-wide run-of-river facilities considered ranges from 4 MW to 253 MW;
- The unit energy costs for Province-wide run-of-river facilities considered range from \$58/MWh to \$196/MWh;
- The Site C Project is considered and is reported to have a capacity of 912 MW and a unit energy cost of \$85/MWh; and
- No other hydroelectric developments on the Peace River are considered.

The decision not to consider other potential smaller-scale hydroelectric developments on the Peace River appears to be inconsistent with other considerations made in the Draft ROU Report. A review of the pre-feasibility study² of a cascade of smaller hydroelectric developments on the Peace River carried out in 2003 by BC Hydro indicates the following:

² BC Hydro. 2003. Peace Cascade Development Prefeasibility Study For A Cascade of Low Consequence Structures as an Alternative to Site C. Prepared by Klohn Crippen Consultants Ltd. and SNC-Lavalin Inc. for B.C. Hydro.

- Potentially seven sites could be developed between the Peace Canyon Dam and Fort St. John ranging in capacity from 77 MW to 130 MW for a total of 748 MW;
- Though individual cost estimates were not prepared for each site, an alternative approach to costing indicated that direct costs for the seven sites, including contingency, ranged from \$450 million to \$550 million and totaled \$3.58 billion;
- The unit energy cost for the seven sites collectively was determined to be \$81/MWh, which compared to \$55/MWh at Site C at that time;
- Costs per installed megawatt range at each of the seven sites ranged from \$4 million to \$6.5 million, with an average of \$4.8 million;
- Making reasonable assumptions,³ the average unit energy costs of the seven Peace River cascade facilities in current dollars is about \$125/MWh with a range from \$104/MWh to \$170/MWh;
- There are inherent costs savings in incremental development of a series of smaller facilities, and it is unclear whether these savings are captured in the unit energy costs presented in the IRP documents.

In summary, the Peace River cascade facilities are clearly within the range of the capacity and unit energy costs of the other run-of-river hydro facilities considered in the Draft ROU Report, and yet they are not considered. This, despite the fact that the information available for the Peace River cascade facilities is far more developed than for many (if not most) of the run-of-river facilities on other rivers that are considered in the Draft ROU Report.

Restrictions on Natural Gas. "It is very unlikely that a proponent could obtain an environmental assessment certificate and/or air emission permit for gas generation in the Lower Mainland. Metro Vancouver has responsibility for issuing air emission permits for LM facilities, and has taken the public position that it would not welcome gas generation within the Lower Fraser Valley (LFV) airshed. In addition, the Province, in its news release concerning Direction No. 2 to the British Columbia Utilities Commission providing that for planning purposes Burrard Thermal Generating Station (Burrard) cannot be relied on for any firm energy, citing concerns with Burrard air emissions in the LFV airshed."⁴ These realities make the most affordable alternative to Site C, namely natural gas, very difficult to develop within the Province without construction of additional transmission lines. Again, this tends to bias the process in favour of Site C.

³ Costs per installed megawatt reflect unit energy costs per MWh; and the ratio between the costs of the smaller facilities and Site C determined in 2003 still applies in 2010.

⁴ See BC Hydro. 2011 IRP Technical Advisory Summary Brief: Role of Gas Fired Generation.

Northeast Transmission Line to the Horn River Basin. According to the 2011 Technical Advisory Committee Summary Brief, “the key drivers of the 2010 Load Forecast are the anticipated growth and potential load in the oil and gas sector in B.C.’s Northeast and the mining sector in the Northwest.” The Horn River Basin results in “significant potential electrification load” that can be met by BC Hydro (integrated, clean, renewable) or by customer self-supply (non-integrated, gas).

The goal of a northeast transmission line (NETL) in order “to fuel energy development and reduce greenhouse gases” was first announced by the BC Government in February 2009.⁵ Recently, Treaty 8 was informed by BC Hydro that it is now considering the feasibility of the NETL. Interconnecting the Horn River Basin with the electricity grid is put forward by BC Hydro as one option among many for meeting the increasing needs of northeastern BC. While the NETL could result in the interconnection of some additional intermittent small-scale hydro-electric and wind facilities, the interconnection of the Horn River Basin can be reasonably assumed to increase the demand for dependable generation capacity, which capacity cannot be fully delivered by run-of-river hydro or wind. In other words, any option that involves interconnection of the Horn River Basin increases the need for Site C.

That the NETL is put forward as a means to reduce greenhouse gases is puzzling. The ultimate outcome of interconnecting the Horn River Basin to the grid is to use a lower greenhouse gas emitting energy source (hydroelectric power) to produce a higher emitting source of greenhouse gas, namely natural gas. This natural gas will then be exported to produce electricity (and greenhouse gas emissions) elsewhere or used to fuel the tarsands, an even higher emitting source of greenhouse gases.

The move to assess the feasibility of interconnecting the Horn River Basin at this time suggests that BC Hydro has already concluded that the portfolio of resources in the IRP will need to account for the dependable generation requirements of the Basin, which increases the requirements for Site C.

⁵ http://www2.news.gov.bc.ca/news_releases_2005-2009/2009OTP0029-000190.htm

Inadequate Investment in Geothermal. The IRP documents also suggest that though geothermal power is commercially available, uncertainties regarding the geothermal resource potential have restricted development in British Columbia and “make it only a longer term resource option”. The uncertainties surrounding geothermal development indicated in the IRP documents relate to concerns about remote access to potential sites and the initial high costs of confirmatory and feasibility drilling programs. As a result, geothermal is excluded from the base resource options.

There are several advantages to developing the geothermal resources that are acknowledged, if only between the lines, within the IRP documents. First, geothermal provides 100% dependable generation capacity with minimal seasonal or other intermittence. This is important to note since the Province appears to have few other future sources of dependable, non-carbon emitting generation capacity, given the prohibition on large hydro in the *Clean Energy Act* and the apparent unwillingness to utilize the Province’s natural gas resources for domestic electricity production. Secondly, unit energy costs at the point of interconnection are clearly competitive with Site C as noted throughout the IRP documents. Also, the development of the geothermal resources of the Province could proceed incrementally, given that the capacity of new facilities would very likely be between 10 MW and 250 MW, avoiding oversupply. This contrasts with the development of 900 MW at Site C. There are inherent costs savings in incremental development, and it is unclear whether these savings are captured in the unit energy costs presented in the IRP documents.

The state of geothermal development in the Province is potentially best summed up in the Draft 2010 Resource Options Report (2010 ROR), which notes that: “In BC, there is little publicly available data to empirically and confidently define the thermal properties of geothermal reservoirs or understand the constraints on bringing hot fluid from the reservoir to the surface.”

What is not stated in the IRP documents is that this has been the case for over twenty years, and yet the Province and BC Hydro have not remedied the situation. At the March 16 workshop, BC Hydro representatives noted that geothermal is not currently being bid into BC Hydro power calls, despite its eligibility and low unit energy costs. Reasons given were the high

costs of initial drilling, as well as the fact that many of the skilled and experienced geothermal companies are now working in other jurisdictions in the United States, where meaningful incentives exist to develop geothermal resources.

In summary, Treaty 8 is concerned that the prolonged lack of investment in British Columbia's geothermal potential on the part of both BC Hydro and the Province has led to a situation where an otherwise potentially viable alternative to Site C is unavailable. Again, the result of this neglect prejudices the IRP process in favour of inclusion of Site C in the preferred portfolio.

In addition to concerns about Site C, the IRP documents also do not suggest a clear way forward for future investment in the geothermal resources of the Province. While at minimum the development of a small (~20 MW) commercial-scale facility could form part of the preferred portfolio, this option appears to have already been precluded. It is difficult to see how this does not have long-term implications for the development of other large hydro sites in the Province beyond Site C. Table 15 of the 2010 ROR indicates that the only alternative to geothermal or Site C that would provide significant dependable generating capacity is coal-fired with carbon-capture and storage, a technology that the 2010 ROR acknowledges is "not presently viable on a commercial scale". This raises the concern that the Province would need to consider coal without carbon capture, natural gas fired electricity generation beyond the 7% currently permitted, or revisit Schedule 2 of the *Clean Energy Act*. The development of Site C appears to delay this consideration by a few years, but not much longer. Ultimately, the development of additional large-scale hydro resources currently prohibited by Schedule 2, a prospect opposed by many First Nations across the Province, appears to be quite likely without investment in the only other non-greenhouse gas emitting, dependable generation source of energy available in the Province, namely geothermal.

Additional Planning Considerations

In addition to the above concerns respecting the inadequacy of the consultation process and the actions to date that have prejudiced the IRP process in favour of inclusion of the Site C Project within the preferred portfolio, Treaty 8 has a number of other observations.

Alternatives to Site C. “The IRP will examine the need for and alternatives to Site C, and this may be used in the environmental assessment.” Treaty 8 is concerned that the current process, with its considerable consultation inadequacies, is intended to replace meaningful discussion of alternatives to Site C during the environmental assessment process.

Characterization of Site C as “Clean”. Site C is not a clean energy source. The use of this title biases potential participants in the IRP process in favour of the proposed Site C Project.

Cumulative Effects. “Cumulative environmental impact analysis is beyond BC Hydro’s mandate. The IRP is neither intended, nor designed, to address the cumulative environmental impacts of energy projects at a regional, land-based level. The Environmental Assessment process reviews cumulative impacts for projects that meet reviewable criteria.” This approach is unlikely to meet the needs of First Nations, as cumulative effects assessment must be done at the regional planning level and not at the project-specific level where the most effective means to avoid impacts on Section 35(1) Rights are precluded simply by the selection of a preferred project.

In addition, Treaty 8 notes that changes to the operating regimes of existing hydroelectric facilities is not contemplated in the IRP process. We believe that this makes the process unnecessarily restrictive and prevents consideration of operating regime changes at the WAC Bennett dam, which changes could have lasting and substantial benefits to both reservoir and downstream ecosystems. While we acknowledge that there could be a cost to such regime changes in terms of dependable generation capacity and total energy generation, similar operating regime changes are contemplated in the *Clean Energy Act* for the Burrard natural gas facility in the name of improving environmental performance (i.e. reducing greenhouse gases) at the expense of dependable generation capacity and total energy generation. This appears to reflect a bias in favour of reducing the adverse environmental effects of greenhouse gas while perpetuating the adverse environmental effects of the hydrological regime change on the Peace River, which bias is not acknowledged or justified in the information presented in the IRP.

Conflict of Interest. At the March 16 workshop, T8FN consultants raised the issue of a likely conflict of interest between BC Hydro’s system planning and electricity supply responsibilities. This conflict of interest arises when system planning involves choosing between demand-side

and supply-side alternatives, as is the case with the IRP. Any decrease in electricity supply results in a reduction in revenue upon which BC Hydro depends to meet its financial objectives, including payment of dividends to its primary shareholder, the Province. This conflict represents a structural constraint on utility demand-side management programs because it will always be in the utility's interest to sell more electricity.

To address this conflict, electricity demand-side management programs are best managed by an independent non-profit organization, rather than by utilities such as BC Hydro. This separation of electricity generation and system planning roles has already occurred in several jurisdictions. The Ontario Power Authority and Efficiency Vermont are a couple examples. Alternatively, efforts can be taken to “decouple” profits from levels of customer electricity consumption. These efforts include full demand-side management program cost recovery, adequate compensation for lost revenues, and allowing the utility to earn a regulated rate-of-return on demand-side management investments.⁶ It is unclear to what extent such measures are in place in British Columbia.

Proposed Treaty 8 Consultation Plan

Treaty 8 has concerns as to whether effective consultation with our First Nations can occur this late in the IRP process. We are putting forward this Plan in an effort to steer the process in a different direction before additional actions are taken that would further prejudice effective and meaningful consultation.

Process Steps. It is our understanding that BC Hydro has proposed the following steps in the IRP process pursuant to the March workshops:

- April 5-6 – TAC Meetings regarding analysis and development of portfolios
- April 8 – Distribution of March Workshop notes to participants
- April 28-29 – TAC Meetings regarding analysis and development of portfolios
- April 30 – Submission of comments in response to March workshops
- Late May – Publication of alternative portfolios

⁶ Kushler, M., York, D. and P. Witte. 2006. Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives, ACEEE Report #U061 (<http://www.ceaa-acee.gc.ca/050/documents/48651/48651E.pdf>)

- Summer – Preparation of a Draft IRP
- September-October – Regional Workshops on Draft IRP
- November – Submission of comments in response to the Draft IRP
- December 3, 2011 – IRP sent to government

Consultation on Portfolios. No consultation on the portfolios is contemplated in the IRP process. Treaty 8 is concerned that what will be presented in the Draft IRP will include only the preferred portfolio and that there will be no opportunity for meaningful discussion on the process of portfolio development or the merits of various alternative portfolios.

Treaty 8 wishes to meet with BC Hydro to discuss the development and evaluation of potential portfolios prior to the publication of the portfolios later this spring. Specifically, Treaty 8 wishes to discuss several matters raised in this letter and other concerns we may have upon review of the materials from the Technical Advisory Committee meetings related to the portfolios.

Consultation on Draft IRP. In addition to participation in the scheduled workshops concerning the Draft IRP, Treaty 8 is seeking the opportunity to discuss the Draft IRP in detail with BC Hydro. This discussion would focus on the implications of the IRP as these relate to Treaty 8 territory, on the development of energy resources within the territory, and on the development of hydroelectric resources on the Peace River, to the extent such development is contemplated or facilitated by the recommendations contained in the IRP.

Technical Advice. In order to participate meaningfully in the IRP process, the T8FNs require independent technical advice and support. This need was recognized early in the process during the First Nations workshop of September 24, 2010. It is envisioned that technical advice will be required to review documents prepared during the IRP process, to participate in meetings and workshops with BC Hydro and to assist in the preparation of written submissions to BC Hydro.

Workplan and Budget. Treaty 8 proposes the Workplan and Budget in Table 1 for our participation in the IRP process.

Table 1: Workplan and Budget

Consultation Activity	Description	Estimated Costs
March Workshop	Preliminary Review of IRP Materials	\$5000

	Workshop Participation	\$500
	Preparation of Comments	\$2500
Consultation on Portfolios	Technical Review of IRP Materials	\$14000
	Meeting Participation	\$3500
	Preparation of Comments	\$3500
Consultation on Draft IRP	Technical Review of Draft IRP	\$10000
	Workshop and Meeting Participation	\$3500
	Preparation of Comments	\$3500
Travel and Disbursements		\$3000
Total		\$49000.00

Closing

In closing, Treaty 8 wishes to participate actively and meaningfully in the development of BC Hydro's Integrated Resource Plan. However, we believe that the consultation process currently being implemented by BC Hydro will not result in adequate consultation with our First Nations. This is especially the case when one considers the implications that the IRP will have for development of energy resources within our territory, particularly the potential development of the hydroelectric resources of the Peace River, including the proposed Site C Project.

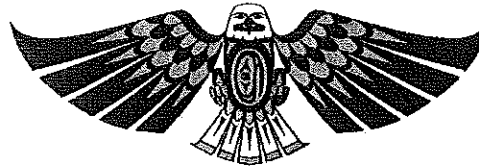
Please contact my office to arrange a time for us to discuss the issues raised in this letter, including our proposed Consultation Plan.

Sincerely,

[original signed]

Tribal Chief Liz Logan

cc: Treaty 8 Chiefs Davis, Tsakoza, Whitford, Willson
Shona Nelson, Treaty 8



TSAWWASSEN FIRST NATION
s̓c̓əwəθən məsteyəx^w

April 29, 2011

Via Email

Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

Dear Sirs:

Re: BC Hydro Integrated Resource Plan ("the Resource Plan")

We are attaching comments with respect to the Resource Plan from Tsawwassen First Nation ("TFN"), prepared by Policy Analyst, Colin Ward.

These comments are provided as the result of a meeting with the TFN Advisory Council, made up of community members.

TFN would like to make clear that any construction or generation of energy under the Resource Plan must be done in a manner that does not impact TFN Aboriginal and Treaty Rights. While TFN appreciates the requirement for BC Hydro to plan for future energy needs, TFN expects to be fully consulted, and if necessary, accommodated.

Moreover, we want to be clear that the contribution of our comments on the Resource Plan does not in any way diminish any aspect of TFN's Aboriginal and Treaty rights.

Yours truly,

TSAWWASSEN FIRST NATION

A handwritten signature in black ink, appearing to read "Tina Dion".

for Tina Dion
Director, Legal Services

Enc.

From: CYNTHIA COLLINS [mailto:cynthia.collins@IntegratedResourcePlanAppendix7G]

Sent: 2011, May 17 3:18 PM

To: Integrated, Resource Planning; 2011 IRP

Subject: Integrated Resource Plan

May 17, 2011

Sorry its taken so long to get back to you .

Actually you did not respond back to my email when I said that Matsqui has some comments or highlights on some of the comments made at the March 4th workshop.

I am making submission with some of the highlights and comments from the Chief :

On Consultation Process

- You can't have higher level plans without lower level plans.

2011-06-06

670 of 759

August 2013

- An aggressive timeline for such a big plan ,it was questioned how First Nations are supposed to respond to BC Hydro within the timelines.They would like to see better engagement.
- This plan is a high level government decision and should be made between the Chiefs and government as they are the ones mandated to make the decision.BC Hydro is only interested in developing assets and making money and that it is unbalanced and that it is an unfair relationship with First Nations.
- There should have been a session before the current one,there is too big a time gap from the meeting and comment period to the release of the draft plan for comment
- Another step is needed whether that it is information sharing workshops,etc.
- Crown corporations need to directly engage with First Nations
- No solutions to past plans and their impacts have been provided,but now BC Hydro wants to discuss future plans- there are power lines chopping up First Nations' territories without benefit to First Nations.

A significant objection to the consultation process:

- Information sharing NOT Consultation
- 'Consultation' has legal components to it and BC Hydro needs to understand the legalities of that term.
- It is important to know what the definition of Consultation and Accommodation means to BC Hydro.
- Workshops are NOT Consultation
- Technical funding should be made available for First Nations to engage in healthy debates or discussion

Expectations regarding consultation:

- There needs to be capacity dollars to make it meaningful and provide direction and/or next steps

Electricity Generation Options

- It was indicated that as First Nations they will rally behind those First Nations in the area of Site C who are opposed to the project.
- Title and Rights concerns when talking about resource options and their attributes- resources options are on land the First Nations have Rights and Title,nothing being mentioned to First Nations for future development options,and the defect in the economic assessment-Title and Rights must be addressed.

Impacts associated with the renewable options

- Concern with pursuing wind farms as the land may be destroyed to put up wind 'fans'- the concern is with the clearcutting of trees and the affect of air quality and cleaning carbon out of the air.
- The industry is driven by the fact that money will offset any impact - but First Nations do not believe that.

Transmission Planning

- The rate for electricity should be lower when a transmission line goes through a traditional territory.[Matsqui traditional territory]
- Require more information to be fairly engaged on the approaches
- Revenue sharing being involved might be viewed in a different perspective for first Nations
- Government to Government partnerships

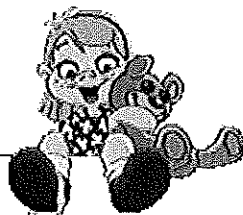
Export Market potential

- Is this idea to conserve -so that the Province can generate more energy for export?
- Disturbed that there is no guarantee that the independent power producers will sell their electricity to BC Hydro, but could sell it to the highest bidder. Could this result in higher BC Hydro rates???? - Can you tell me what the intervener page in the Vancouver Province is about [May 15,2011] It talks about higher rates next year and raised again a year or so from then???????? - How is this justifiable when there is being boxes and line being set up for future hookups- Why are we subjected for paying for this developments not negotiated with First Nations?

Matsqui First Nation is still waiting to be met with at the band level to have the Integrated Resource Plan information be presented to them as an Information Gathering meeting for the Governing Body and a few interested Matsqui members.

Yours Truly

Cindy Collins



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James, Loretta

From: 2011 IRP
Sent: 2011, June 03 4:14 PM
To: 'cliff sampare'; elmerderrick@gmail.com; elmerderrick@telus.blackberry.net; gsebastian@gitxsan.com
Subject: RE: BC Hydro Integrated Resource Plan - First Nations Consultation

Hello Mr. Sampare,

Thank you for your input. I look forward to seeing you again.

Have a good weekend.

Regards,
Charlie

From: cliff sampare [mailto:cliffsampare@hotmail.com]
Sent: 2011, June 03 12:30 PM
To: 2011 IRP; elmerderrick@gmail.com; elmerderrick@telus.blackberry.net; gsebastian@gitxsan.com
Subject: RE: BC Hydro Integrated Resource Plan - First Nations Consultation

Dear Mr Weiler,

Thanks for your letter with 1st. Nations consultation on BC Hydro's Integrated Resource Plan. I will be viewing your webpage with a response on our end. As this is still on a draft plan stage, I would recommend that BC Hydro take in consideration on indenturing our "Gitxsan Policy" pertaining to water, land, fish, wildlife, and mineral within the 33,000 sq.km. on Gitxsan Traditional Territories; this can be summarized as part of our input.

Again, I will get back to you on our concerns if any with above.

Regards 
Cliff Sampare
Director-Sustainable Development
Gitxsan Chiefs Office

om: 2011IRP@bchydro.com
To: cliffsampare@hotmail.com
Subject: BC Hydro Integrated Resource Plan - First Nations Consultation
Date: Thu, 2 Jun 2011 22:18:22 +0000

2011-06-15



STÓ:LŌ TRIBAL COUNCIL
#2776 Chowat Road,
Box 440, Agassiz, BC V0M 1A0
phone 604-796-0627 fax 604-796-0643

June 6, 2011

Without Prejudice

Charlie Weiler
First Nation Consultation Project Manager
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations

Dear Charlie

Re: First Nations Consultation on BC Hydro's Integrated Resource Plan

We are writing to you in response to the letter you sent us dated June 2, 2011. We thank you for the letter, and are pleased that BC Hydro recognizes the rights and title of the Stó:lō within our traditional territory. As the caretakers of S'olh Téméxw since time immemorial it is vital that our knowledge and experience be included in the decisions that are made on many levels.

In order for us to adequately review and respond to the Integrated Resource Plan (IRP), we require capacity dollars to do so. It is in the best interest of both parties to understand the IRP, and ensure that we fully address the questions posed by BC Hydro in a timely manner. At this time, our department at the Stó:lō Tribal Council is limited to two full time and one part time employees, and we receive over 400 referrals annually. Our capacity to sort, file, and adequately respond to referrals is overextended at this time.

We look forward to a favorable response from your organization.

Please confirm your receipt of this response letter.

Yalh Yexw Kw'as Hoy
Carrielynn Victor

A handwritten signature in black ink, which appears to read "Carrielynn Victor". The signature is written in a cursive, flowing style and is positioned below the printed name.

Rights and Title Researcher
Stó:lō Tribal Council

James, Loretta

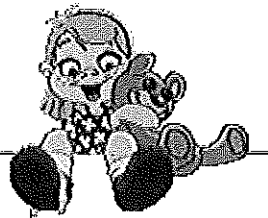
From: CYNTHIA COLLINS [cynthia.collins@shaw.ca]
Sent: 2011, June 14 11:30 AM
To: 2011 IRP
Subject: Consultation

June 14,2011

I did not get to review the letter of June 2,2011 But as far as those in attendance at the March 4,2011 meeting [not **Consultation**] the discussion of taking out the word Consultation was very strong and demanding.. Matsqui also said that to have meaningful relationship and Consultation Governments of Governments need to meet with Matsqui.

I firmly believe BC Hydro needs to be corrected [publicly if need be] on the concept of Consultation word used in context,letters,emails,news etc.

Cindy Collins



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James, Loretta

From: Debra Schneider [debskawahlook@gmail.com]
Sent: 2011, June 14 11:11 AM
To: 2011 IRP
Subject: June 2, 2011 letter

Charlie,

At our meeting that we had in Abbotsford in the Ramada Inn on March 4, 2011, the First Nations requested that BC Hydro take the word "Consultation" out of every document, correspondence, etc., and BC Hydro agreed to it. I see on your letter of June 2, 2011, you still have the word

"Consultation" on it. We expressed to BC Hydro that the information sharing meeting we had in Abbotsford was NOT considered consultation. If you want to continue a working relationship with the First Nations, I would suggest that you take the word "Consultaion" out of the documents,

letters, etc.

Regards,

--

Debra Schneider
lands Manager/Councillor
Skawahlook First Nation
58611-A Lougheed Hwy.
Agassiz, BC
V0M-1A2

604-796-9129 (office)
604-796-9289 (fax)



Haisla Nation Council

Haisla P.O. BOX 1101, KITAMAAT VILLAGE, B.C. V0T 2B0
PHONE: 250 639-9361 TOLL FREE: 1-888-842-4752 FAX: 250 632-2840

June 14, 2011

VIA FACSIMILE TO: 1-604-528-2822

BC Hydro
Aboriginal Relations and Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8

Attn: Charlie Weiler, First Nation Consultation Project Manager

Dear Mr. Weiler:

Re: Consultation with First Nations

Thank you for your letter dated June 6, 2011 advising that we can find, on the internet, a report of BC Hydro regional workshops on the development of an "integrated resource plan".

We have reviewed that report and have the following comments:

- Much of the report is of a very general nature and does not address the unique issues affecting the Haisla Nation.
- The report acknowledges that "most participants" stated that what BC Hydro was doing was not consultation. Indeed "only one participant" (emphasis added) acknowledged that the process was consultation (see pages 32 – 37). Despite this universal understanding on the First Nations side the report still refers to this process as consultation (see, for example pages i, ii, iii, 2, 3, 4, 5, 6, 7, and 9). In our view this characterization of the process is both self-serving and misleading. The entire exercise appears to be geared towards creating a paper record of consultation while at the same time avoiding real discussion and negotiation with First Nations.

In general we question the utility of and the motivation behind the "regional workshop" model for consulting with First Nations. If BC Hydro wants to provide generic information to all First Nations in British Columbia you can put that in the mail. If BC Hydro wants to sit down and engage First Nations with respect to their very real and unique issues with BC Hydro then BC Hydro needs to take the time necessary to meet with individual First Nations. If BC Hydro wants to create the impression of consulting without actually doing so, then BC Hydro is very much on the right track.

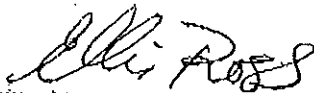
Integrated Resource Plan Appendix 7G

We emphasize that our First Nation is the only entity that can legally discuss our rights and title issues. While we are affiliated with First Nations political organizations (the First Nations Summit and the Assembly of First Nations), and while we have no objection to you having discussions with these organizations, we are certain that they will advise you that they have neither the authority nor the mandate to enter discussions or negotiations concerning aboriginal rights and title. There are no shortcuts here. As inconvenient as it may be for BC Hydro, you need to talk with individual First Nations directly.

We have significant issues in our Territory concerning electrical generation and transmission. We tried to raise these issues with BC Hydro by intervening in the recent Section 5 Inquiry but that inquiry was preemptively cancelled by the Government of British Columbia. Our issues with BC Hydro remain. They are complicated and are specific to our Territory. Accordingly, it is not appropriate to deal with these issues at a multi-party regional "workshop" or with aboriginal political organizations.

We ask that you schedule a meeting between the Haisla Nation government and BC Hydro at your earliest opportunity to commence a consultation process.

Yours truly,



Ellis Ross
Chair Person
Interim Governance Committee
Haisla Nation Council

cc: David Cobb, President and CEO, BC Hydro
Fax: 604-623-4459

Grand Chief Edward John, First Nations Summit
Fax: 604-926-9923

Dan Smith, First Nations Summit
Fax: 604-926-9923

Chief Douglas White III, First Nations Summit
Fax: 604-926-9923



ST'AT'IMC CHIEFS COUNCIL

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www.statimc.net



September 12, 2011

Charlie Weiler
BC Hydro Aboriginal Relations
6911 Southpoint Drive
Burnaby BC V3N 4X8
Fax: 604.528.2822

Dear Charlie:

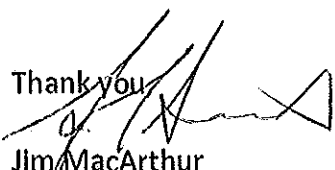
Re: Integrated Resource Plan

Thank you for your August 12 letter updating us on the progress of the Integrated Resource Plan (IRP).

The St'at'imc Chiefs Council (SCC) has discussed this plan and the regional workshops BC Hydro hosted last spring. As you know, St'at'imc Territory has been heavily impacted by BC Hydro infrastructure over the years, and it is believed the Territory will continue to experience development pressures as BC Hydro responds to the Province's future energy needs. Consequently, the SCC believes it is important BC Hydro engage the SCC directly in consultations concerning your IRP, possible infrastructure planning, and the possible adverse impacts of such plans.

The regional workshop approach pursued in the spring does not acknowledge the government-to-government relationship the St'at'imc have with the Province and its Crown corporations. Our experience of last spring's workshop was it is too generic and designed to target stakeholders instead of First Nations. As a result the regional workshop approach misses the essential substantive and procedural aspects to make consultation meaningful.

However, the SCC does want to discuss the proposed IRP and have St'at'imc interests identified and mitigated. Could you please contact me directly (250) 256-7523 to discuss when the draft IRP will be available for review and when BC Hydro is available to meet with the SCC for a focused discussion on the potential impacts of the draft.

Thank you

Jim MacArthur
Inter-governmental Advisor
St'at'imc Chiefs Council

From: NARRENE WILLIAMS <narrene_sns@shaw.ca>
Sent: 2012, July 31 11:46 AM **Integrated Resource Plan Appendix 7G**
To: 2012IRP
Subject: JULY 31, 2012

Hello to all the team members who are working on this irp project.

I didnt know this work was being done, until i read it on your website....there are a lot of "big" educated words that may be hard for some people to comprehend...like myself...but it sounds like your trying to develop a plan 2 help ppl not use so much electricty? or?

for our first nations people hydro can be a difficult thing 2 talk about as many of our people cant keep up w/the cost....which can lead to many hard days which include loss of essentials - food in the refrigerator, food in the freezer(fish, berries, deer), and heat....which i have expereined myself....no hot water or light is luxuries in my opinion a human can live w/out it....but when the worst thing that happens is your chlidren get apprehend by the mcf because you cant provide adequate shelter for the kids....so i think we should consider hydro education as an essential skill in some sense...teach our people how to think n train the kids that are growing up that hydro is a must and that we MUST budget even if it is just 20/week, and to teach them about pre-authorize debit option, teach them that natural light is beautiful as we once used before electricity...as I put a sign on my bathroom door at home - You dont need to turn the light on during the day, you can see just fine....or at my office i have started leaving the lights off as we have lots of natural light in the front room, but some staff are soo used to having the lights on i have heard "why is it so dark in here?" " whats going on? how come there no lights?" "narrene is that u keeping the lights off?" n i just answer them all by saying yes its saves us money....but they dont like it...but i dont care.....they can turn it on themselves if it bothers them..but i wish we could change ppls way of thinking about natural light during the day.....or teach them the use of clothes lines... there are so many thoughts in my head n sorry if i was rambling on ..but i think we as aboriginal people need to learn about how to save on electricty..n practice what we learn dont just go to workshop n say ok n not even try n change our ways.....and learn to put money aside to pay for the bill...as it is just important as food...to survive....bottom line aquirng funding for a energy manager(not sure of title - i read it in the report/plan) is a good idea....to teach our ppl how and why its important to know everything that they can about hydro...some day it may be gone because of the humans not being so careful....n then what? they wish they did conserve when they were being told....

Narrene Williams

SSEAp

Stó:lō Strategic Engagement Agreement Pilot Project
Leadership Board

14 August 2012

Charlie Weiler
BC Hydro
10th Floor, 6911 Southpoint Drive
Burnaby, BC
V3N 4X8

Re: BC Hydro Integrated Resource Plan 2012

Dear Charlie Weiler,

We are writing in response to the BC Hydro 2012 First Nations' Workshops for the Draft Integrated Resource Plan (IRP). The Stó:lō Strategic Engagement Agreement Pilot Project (SSEAp) Leadership Board would like to thank BC Hydro for initiating a dialogue on the draft IRP with the First Nations communities. We represent 14 First Nations whose respective traditional territories comprise parts of their ancestral lands within S'ólh Téméxw including, but not limited to, the entire Fraser lowlands and parts of the south coast mountain ranges and valleys. Historical, current and future projects and related decisions proposed in the draft plan will inevitably impact a range of cultural, social, environmental and economic values and interest of our people, thereby infringing on their Aboriginal Rights and Title.

We feel that the First Nations Workshops for the IRP have not adequately addressed the concerns previously raised by our member communities. The workshops, therefore, need to be appropriately employed to include Aboriginal knowledge and experience to make informed and collaborative decisions on the land and resources where our communities have asserted Aboriginal Rights and Title.

In view of the extensive scale and scope of the Integrated Resource Plan and a range of its potential cultural, ecological and economic footprints on our traditional territories, we recommend that BC Hydro engage in a respectful and meaningful consultation process with the SSEAp Leadership to discuss and, where appropriate, accommodate the concerns, values and interests of our member communities, as well as their capacity constraints.

Please advise us on how BC Hydro proposes to further engage in full and meaningful consultation with the SSEAp Leadership Board on the draft IRP.

Sincerely,



Otis Jasper
SSEAp Board Chair



Treaty 8 Tribal Association

10233 – 100th Avenue, Fort St. John, BC, V1J 1Y8

Phone: (250) 785-0612 Fax: (250) 785-9800 or 785-2021

Website: www.treaty8.bc.ca

August 13, 2012

Sheila Reynolds
Integrated Resource Plan
BC Hydro Aboriginal Relations & Negotiations
6911 Southpoint Drive
Burnaby, BC V3N 4X8
Fax: 604-528-2822

Re: Treaty 8 Comments – Draft Integrated Resource Plan

Dear Ms. Reynolds,

Thank you for your letters of May 12 and May 18 concerning BC Hydro's Draft Integrated Resource Plan (IRP). Further to the information session hosted by BC Hydro in Fort St. John on July 5, we are writing to provide BC Hydro with comments on behalf of Doig River, Halfway River, Prophet River and West Moberly First Nations (the "Treaty 8 First Nations" or "T8FNs") concerning the Draft IRP, and the IRP process to date.

Additional detailed comments concerning the implications of the Draft IRP in relation to the proposed Site C Project may be provided to BC Hydro and the Provincial Crown through other processes, including the environmental assessment process for Site C. For this reason, we have copied BC Hydro Site C representatives on this submission.

Consultation Issues

Consultation not commensurate with Potential Impacts. Site C is the only project specifically contemplated in the IRP process, and so potentially affected Treaty 8 First Nations should have been consulted directly from the outset and not merely as "other First Nations in British Columbia". The "same" consultation is not "equivalent" consultation when the courts have

clearly stated that deeper consultation is required based on the nature of the potential impacts on Section 35(1) Rights.

Inadequate time for Consultation. In general, the timeframe for finalization of the IRP is not conducive to adequate consultation with potentially-affected First Nations. This issue has been raised throughout the process. The document presented for consultation is several thousand pages, and it is not reasonable to expect the T8FNs or other Aboriginal groups to comprehend the considerable implications of the Draft IRP in the timeframe provided.

Capacity Funding. The level of capacity funding offered to First Nations will not result in meaningful consultation. The First Nations are being offered \$250 per participant to attend a couple of workshops. The commitment of limited resources today will result in the creation and continuation of conflicts tomorrow.

Inadequate Consultation Plan. Overall, the two sets of workshops and the actions carried out by BC Hydro do not amount to adequate consultation with our First Nations. This is especially the case considering the implications of the outcomes of the IRP process for potential hydroelectric development on the Peace River in Treaty 8 territory.

Planning Issues

Deterministic versus Preventive Approaches to Energy Planning. The Draft IRP begins with consideration of a number of potential alternative futures for economic growth in British Columbia. BC Hydro then goes on to ask how much energy will be required, and from where and when, in order to meet the various economic growth scenarios. The merits, sustainability or possibility of continued economic growth are never addressed, and economic growth is taken as the appropriate starting point for the energy planning process.

“Our province has an enviable quantity of future sources of clean and renewable energy.” (Executive Summary, p.5)

Potential resources (e.g. rivers, hillsides, forests, etc.), which currently meet other needs and satisfy other values, are presumed to be available for exploitation to serve our energy needs. There is no analysis as to whether this can be sustainably achieved and, if so, under what possible conditions.

One could, however, take a very different approach. Rather than the economy determining the amount of energy we require, the available and sustainable energy resources would determine the kind of economy that we could afford to have in British Columbia. In other words, energy planning would consider and respect the real limits that restrain continued energy

development within the Province and provide the planning boundaries and values for the responsible development of energy resources, and ultimately of a sustainable economy. This approach would prevent the incremental and eventual development of all of the technically feasible energy resources of British Columbia, which is the logical outcome of the approach taken in the Draft IRP. This “limits-based” or preventive approach would begin by acknowledging, among other things, that:

- sufficient conservation lands and waters need to be identified and set aside throughout the Province based on the maintenance of biodiversity – for example, only 4% of the Peace Region is currently protected, which is well below the 20-30% considered necessary by conservation biologists, and below the objective of 12% set by the Province for the year 2000;¹
- sufficient lands and waters would be set aside, in consultation with Aboriginal groups, for the exercise of treaty and Aboriginal rights throughout the Province in areas traditionally used;
- GHG emissions would be set so as to fall over time to a *per capita* limit consistent with maintaining global temperature increases below +2C; and
- a sufficient agricultural reserve would be maintained to permit the Province to be self-sufficient in food production should that become necessary.

A limits-based approach would achieve sustainability in energy use within the Province. This contrasts with the approach taken in the Draft IRP, which simply seeks to reduce the growth in electricity demand and its commensurate adverse effects:

“As you will see in the draft plan, conservation continues to be the first and preferred way to close the gap between forecast need and supply — helping keep rates low and protecting the environment.”(Executive Summary, p.1)

While conservation is important, at current levels it will not prevent the eventual exploitation of all available rivers (for hydro), forests (for biofuels), hillsides (for wind) and meadows (for solar) in the service of energy production, not to mention the substantial lands taken up by fossil fuel development. While conservation partially mitigates the adverse effects of the development process, the eventual outcome is the incremental and eventual degradation of extensive lands and waters within the Province in the service of economic growth *vis-à-vis* energy production.

BC Hydro has reached the limit of the conventional approach to energy planning to deliver sustainable outcomes. In order to ensure sustainability, a preventive approach is required that

¹ Fort St. John LRMP Working Group. 1997. Fort St. John Land and Resource Management Plan. File: 31090-25-04.

sees economic and energy development take place within ecological limits and ensures the protection of land and waters for sustainable use.

Demand Projections. BC Hydro makes the following prediction in the Draft IRP:

“BC Hydro customers will need considerable new energy and capacity over the next 20 years. Specifically, in the next 10 years, they will need an additional 4,900 gigawatt hours of firm energy and 1,100 megawatts of peak capacity to meet probable needs.”(Executive Summary, p. 5)

In 2007, only five years previous, BC Hydro said this:

“...we strongly believe that we can go beyond the 50% conservation target set out by the 2007 B.C. Energy Plan and lead change such that in 2027 we would return to 2007 electricity consumption levels while allowing for growth and economic prosperity.”²

No explanation is provided in the Draft IRP as to what specifically has changed to so dramatically alter the projections for energy demand in the Province. The IRP would benefit from an historical perspective on the changing energy demand projections, including clear and complete evidence demonstrating the underlying reasons for these changing projections.

Voluntary Conservation Programs. The Draft IRP suggests the following:

“Pursue voluntary conservation programs that encourage industrial, commercial and residential customers to reduce electricity consumption during peak periods.”(Executive Summary, p.6)

It is widely known that voluntary conservation programs do not work well, particularly in the residential and commercial sectors. In order to lower peak demand, the utility needs to send proper price signals, establish load-shedding contracts with key industries, and implement time-of-use pricing among other actions.

With respect to time-of-use pricing, BC Hydro has spent considerable money and endured considerable opposition in relation to the installation of smart meters across the Province. One of the primary purposes of smart meters is to implement time-of-use pricing in order to shift electricity use away from periods of high demand to periods of low demand, reducing the need for new capacity resources. The Draft IRP indicates that the decision not to consider time-of-use

² Elton, B. November 2007. Letter to customers and resident across British Columbia introducing *BC Hydro. 2007 Conservation Potential Review: The Potential for Electricity Savings, 2006 – 2026, Residential, Commercial and Industrial Sectors in British Columbia*. Summary Report. Submitted to BC Hydro by Marbek Resource Consultants Ltd.

pricing is based on Provincial policy; however, the policy basis is not provided. The T8FNs recommend that the Province and BC Hydro review this policy with the view to understanding how best to implement time-of-use pricing.

Provincial Objectives Concerning LNG Export. The IRP indicates that the Provincial energy objectives include the following:

The provincial government has said it is committed to seeing three LNG plants in operation by 2020. Related provincial goals include ensuring B.C. is competitive in the global LNG market, maintaining leadership on climate change and clean energy, and keeping energy rates affordable.

Leadership on climate change cannot be maintained by committing the Province to export natural gas, the burning of which significantly contributes to climate change. There is no evidence to suggest that the export of natural gas will lead to the displacement of higher GHG emitting fuels, such as coal.³

Contingency Planning. Chapter 7 of the Draft IRP addresses the requirements of the Clean Energy Act with respect to electricity exports, and makes the following conclusion:

“Since the enactment of the CEA, the prospects of export sales of renewable energy in excess of that required to meet self-sufficiency requirements have diminished considerably. Further, the prospects of such sales are not expected to materially improve over the short term.”(p.7-14)

Given the low cost of natural gas and the relative excess of renewable electricity already in the potential export markets, this conclusion is not surprising. However, it is unclear how the Draft IRP addresses this situation other than as a problem preventing BC Hydro from being a net exporter.

“In addition, as part of good utility practice, BC Hydro also recommends contingency plans to prepare for the event that demand is potentially greater than forecast.” (Executive Summary, p. 6)

Currently, the T8FNs are experiencing first hand, in the form of considerable spilling from the WAC Bennett and Peace Canyon Dams, the consequences of oversupply. It is somewhat surprising then that BC Hydro has not also developed in the Draft IRP contingency plans in the event that grid-connected electricity demand is less than forecast. One aspect of such contingency planning would be to address the potential need to dump electricity into export

³ <http://www.theglobeandmail.com/news/british-columbia/bc-liberals-declare-natural-gas-a-clean-energy-source/article4362331/> (accessed July 30, 2012)

markets where prices are likely to be lower or even far lower than the marginal cost of future generation sources in BC, including Site C. In other words, though “the potential export market does not warrant the development of new, additional clean or renewable resources for the foreseeable future” (p.1-5), BC Hydro may be forced to use these markets in the event of oversupply.

Electrification and the Role of Natural Gas. Energy objective 2h) of the *Clean Energy Act* is:

“to encourage the switching from one kind of energy source or use to another that decreases [GHG] emissions in British Columbia”

In the IRP, BC Hydro has taken a somewhat narrow view of this objective by examining the potential drivers of electrification, its ongoing and future impact on the electric system, and when and why electrification might occur. While electrification is one form of energy switching, it is hardly the only form, and objective 2h) of the *Clean Energy Act* appears to require a broader analysis.

The focus on electrification reflects the reality that BC Hydro is constrained in its analysis by its mandate (which deals with electricity and not energy more broadly) and by a restriction on electricity “non-clean resources”.

“In the IRP analysis, BC Hydro evaluated gas-fired generation within the remaining headroom of 7 per cent for non-clean resources.” (p. 6-4)

In many instances, the most appropriate approach may not be electrification (which for BC Hydro’s means *grid-connected* electrification) but fuel-switching to other fuels or to non-grid-connected electricity. One example of this concerns the generation of electricity from natural gas while at the same time converting or avoiding more efficient gas appliances (e.g. instantaneous gas water heaters).

It is noted that BC Hydro hired MK Jaccard and Associates Inc. “to explore the potential for GHG reductions through electrification in British Columbia.” This is not the same as determining which forms of fuel-switching will lead to the greatest decreases in GHG emissions over time, as required by the *CEA*, but focuses the analysis only on electrification. While the analysis and reporting by MK Jaccard and Associates attempts to frame the discussion more broadly, the report acknowledges some of the problems associated with a narrow focus on electrification:

Allowing baseboard electric heating will only reduce emissions if electricity generation produces no GHG emissions. The [baseboard heating] ban reduces electricity demand by 2 TWh in 2050. Even if this electricity were produced by a thermal power plant using carbon capture and storage, the upstream emissions could be equal to the total downstream abatement that occurs without the ban.” (Appendix 22, p. 36).

In addition to the fact that the 7% non-clean energy approach may not allow for optimization in the reduction of GHG emissions, there is the problem of built-in GHG emission increases that are inherent to the deterministic planning approach in which continual growth in electricity demand goes unquestioned. Under this approach, the GHG emissions continue to rise in absolute terms as a result of growth in supply. This is clearly illustrated in Figure 6-1 Remaining Non-Clean Headroom (Firm Energy) and Figure 6-4 Remaining Non-Clean Headroom (MWs, Gas as Baseload), where GWh of natural gas units of electricity and therefore also GHG emissions continue to rise indefinitely.

Environmental Attributes. The environmental attributes used to compare resource options are presented in Table 3-2. The attributes appear to be almost entirely biophysical in nature. For example, no attributes address matters related to heritage, First Nation land use and rights, or agricultural lands. This is the result of the criteria for attribute selection being limited to attributes that can be quantitatively measured.

In addition, no consideration appears to have been given to equitable distribution of adverse environmental effects of the resource options into the future or to consideration of adverse environmental effects already incurred. The authors argue that the selected "high-level environmental footprints are appropriate for comparison of resource options across provincial-scale portfolios." (p. 3-8). However, it appears that there is sufficient information to predict with considerable accuracy which regions of the Province are most adversely affected by which resource options. This is demonstrated, for example, by the fact that the location of the Site C Project, which is the only specific project considered in the IRP, is known, and by the fact that information concerning the locations for small-scale hydroelectric and wind energy are also known. For example, Table 3-10 Summary of Onshore Wind Potential clearly indicates, based on the low cost and quantity of energy, that the Peace River transmission region is disproportionately affected by wind development. Similarly, Table 3-12 Summary of Run-of-River Potential illustrates that the North Coast and Vancouver Island, having the lowest cost and largest available resources, are most likely to be adversely affected by run-of-river hydro development. It is unclear, given the available knowledge, why equitable distribution of effects was not considered among the attributes.

Overall, the use of the attribute approach only indicates how to minimize adverse quantifiable effects. The approach does not indicate what needs to be protected in the Province or within regions of the Province. As indicated above, the outcome of this kind of approach is incremental and continual environmental degradation. Looked at another way, the use of attributes to compare alternatives is relativistic, and tells us which resource options or

portfolios are better than others – it does not tell us whether any of them are good enough to meet the requirements of sustainability.

Cumulative Effects.

“Cumulative environmental impact analysis is beyond BC Hydro’s mandate. The IRP is neither intended, nor designed, to address the cumulative environmental impacts of energy projects at a regional, land-based level. The Environmental Assessment process reviews cumulative impacts for projects that meet reviewable criteria.”⁴

This approach is unlikely to meet the needs of First Nations, as cumulative effects assessment must be done at the regional planning level and not at the project-specific level where the most effective means to avoid impacts on Section 35(1) Rights are precluded due to the focus of environmental assessment on project-related effects.

In addition, the T8FNs note that changes to the operating regimes of existing hydroelectric facilities are not contemplated in the IRP process. The T8FNs believe that this makes the process unnecessarily restrictive and prevents consideration of operating regime changes at the WAC Bennett dam, which changes could have lasting and substantial benefits to both reservoir and downstream ecosystems. While we acknowledge that there would in most instances be a financial cost to such regime changes in terms of dependable generation capacity and total energy generation, similar operating regime changes are contemplated in the *Clean Energy Act* for the Burrard natural gas facility in the name of improving environmental performance (i.e. reducing greenhouse gases) at the expense of dependable generation capacity and total energy generation. This appears to reflect a bias in favour of reducing the adverse environmental effects of greenhouse gases while perpetuating the adverse environmental effects of the hydrological regime on the Peace River and other rivers, which bias is not acknowledged or justified in the information presented in the Draft IRP.

Policy changes not considered in the IRP. During the course of the developing the Draft IRP, there were several matters that were either changed by policy or law, including:

- changes to the *Clean Energy Act* concerning the application of the “clean energy” requirements; and
- the recently proposed *BC Energy and Water Efficiency Act*

⁴ BC Hydro. January 2011. Stakeholder Feedback on IRP Consultation Design (September – December 2010) Summary Report, p.3.

The application of the “clean energy” requirements under the Clean Energy Act were recently changed to exclude natural gas, but only for the purposes of generating electricity for the potential liquefied natural gas facilities currently being proposed for the export of natural gas. The models used in the IRP do not account for this change, and it is unclear how the recommendations in the Draft IRP would change as a result. The effect of this change would tend to reduce the requirement for grid-connected electricity from BC Hydro, and hence the load-resource gap. In addition, the following recommendation related to LNG no longer appears to be relevant:

Undertake work to maintain the earliest in-service date for a new 500 kV transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.

On March 28, 2012, the Provincial government introduced Bill 32 (*BC Energy and Water Efficiency Act*). This legislation would replace the previous *Energy Efficiency Act* and contains measures to improve standards, streamline enforcement and improve energy performance. Given that Bill 32 was introduced after the DSM resource options were created for the IRP, it was not considered in the development of DSM Options 2, 3, 4 and 5. Again, this would also tend to reduce the load-resource gap size.

Disruptive Technologies on the Customer-side of the Meter. In general, the Draft IRP provides minimal to no analysis of generation potential on the customer-side of the meter. While this is not surprising given BC Hydro’s responsibility for grid-connected electricity, the apparent assumption that customer-side generation will ultimately be connected to the grid may be shortsighted. For example, the IRP notes that:

There are no known commercial solar power installations in British Columbia. However, there are several distributed generation installations on the customer side of the meter.

The solar resource option assessment examined commercial installations on the utility side of the meter with commercial scale solar installations sized at 5 MW.

The cost of solar photovoltaic electricity continues to drop rapidly,⁵ to the point where several jurisdictions can now speak of “solar grid parity”. While grid parity remains several years away for British Columbia, it is not inconceivable for solar generation to be adopted without any incentives on a wider-scale on the customer side of the meter within the planning period.

⁵ e.g. see <http://en.wikipedia.org/wiki/File:EU-PV-LCOE-Projection.png>

There are several other potential customer-side generation sources capable of displacing significant energy and capacity requirements, including micro co-generation, small-scale wind, and ground-source and air-source heat pumps. To the extent that the Draft IRP considers these technologies, the discussion is limited to larger-scale, grid-connected applications. The Draft IRP would benefit from a discussion of the potential for generation on the customer side of the meter to be disruptive to the utility's long-term planning objectives. Other industries in British Columbia (e.g. pulp and paper) have suffered considerably as a result of new and disruptive (at least from the industry perspective) technologies once they are widely deployed.

Widespread use of customer-side generation could have several potentially adverse effects for BC Hydro:

- stranded investments resulting from significant decreases in demand for grid-connected electricity;
- increasing rates, as wealthier customers are able to afford the upfront costs of generating their own energy, partially or completely remove their electricity demand from the grid; and
- energy poverty, as those remaining exclusively grid-tied are forced to pay the rising costs of electricity resulting from a shrinking customer base

While the above scenarios may seem unlikely in the context of the current Draft IRP, it was only 5 years ago that BC Hydro was predicting a return to 2007 levels of grid-connected electricity consumption by 2027.

Prejudice in Favour of Site C

Clean Energy Act. In addition to the inadequacies in the consultation process, the T8FNs were also not consulted on the development of the *Clean Energy Act*. This fact is relevant because of the severe restrictions put in place by the *Act* that limit the consideration or development of feasible alternatives to Site C. The *Act* is designed such that inclusion of Site C within the preferred portfolio to meet the potential future electricity needs of the Province is almost inevitable:

- all of the large-scale hydro-electric projects contemplated in the 2008 Long-term Acquisition Plan (LTAP) have been excluded from further consideration in Schedule 2 of the *Act*; and
- section 3(5) of the *Act* requires that BC Hydro must plan to rely on no energy and no capacity from the existing Burrard natural gas facility, except in the case of emergency or as authorized by regulation; even with the changes contemplated in the Draft IRP, there remains very limited reliance on Burrard or on natural gas more generally despite

the large quantities of affordable natural gas available in the Province that are instead being exported to meet the needs of others jurisdictions.

The Site C “Clean Energy” Project. Site C is not a clean energy source, other than in the narrow sense used in the *Clean Energy Act*. The use of this title biases potential participants in the IRP process in favour of the proposed Site C Project.

Alternatives to Site C on the Peace River. A review of the 2010 Resource Options Report contained as Appendix 3A to the Draft IRP indicates that:

- the installed capacity of Province-wide run-of-river facilities considered in the IRP ranges from about 4 MW to 250 MW, and alternative hydroelectric generation projects to Site C on the Peace River are within that range;
- the unit energy costs for Province-wide run-of-river facilities considered range from about \$60/MWh to \$200/MWh, and alternatives on the Peace River are within that range;
- the Site C Project on the Peace River is considered and is reported to have a capacity of 1100 MW and a unit energy cost of \$95/MWh; and
- no other hydroelectric developments on the Peace River are considered.

The decision not to consider other potential smaller-scale hydroelectric developments on the Peace River appears to be inconsistent with other considerations made in the Resource Options Report. The Peace River cascade facilities are within the range of the capacity and unit energy costs of the other run-of-river hydro facilities considered in the Resource Options Report, and yet they are not considered. This, despite the fact that the information available for the Peace River small hydro facilities is far more developed than for many (if not most) of the run-of-river facilities on other rivers that are considered in the Resource Options Report.

The decision not to include potential smaller-scale hydroelectric development on the Peace River may be due to the insistence by BC Hydro, as expressed in other contexts, to “maximize the development of the hydroelectric resources” on this stretch of the Peace River. This insistence precludes the possibility for meaningful consultation and reconciliation of the desire on the part of BC Hydro to develop hydroelectric resources on the Peace River, and the desire of the T8FNs to continue to use the Peace River Valley for the exercise of our Treaty rights.

Inadequate Investment in Geothermal. The Draft IRP suggests that though geothermal power is commercially available at competitive prices, uncertainties regarding the geothermal resource potential have restricted development in British Columbia. As a result, geothermal is essentially excluded from the base resource options. This despite the reality that preliminary investigations by BC Hydro, as presented in Table 3-14 Summary of Geothermal Potential,

clearly indicate the competitiveness of this resource. The Draft IRP continues to avoid serious commitments to development of geothermal resources by indicating in very general terms that:

BC Hydro should continue to work with the Provincial Government to assess the feasibility of developing geothermal. (p. 6-112)

The T8FNs are concerned that the prolonged lack of meaningful investment in British Columbia's geothermal potential on the part of both BC Hydro and the Province has led to a situation where an otherwise potentially viable alternative to Site C is unavailable. Again, the result of this neglect prejudices the IRP process in favour of inclusion of Site C in the preferred portfolio.

Site C Compared to Other "Clean" Resources. Section 6.4.2 compares the cost-effectiveness of Site C to other "clean" resources. Figure 6-15 illustrates the assumptions used to create comparison portfolios that do not include Site C. This figure raises a number of issues:

- the analysis assumes initial LNG only, and it is unclear whether this remains the appropriate assumption in the analysis of the cost-effectiveness of Site C, considering that natural gas is now a "clean" energy source when used for electrification of LNG export facilities; and
- the modeling horizon, at 20 years, would only capture the first 10 years of the operation of Site C, which is not expected to come on-line until 2022 at the earliest.

Table 6-8 appears to present a sensitivity analysis for differing sizes in the load-resource gap (small, medium, large) and different market scenarios. The gap sizes and market scenarios are described in Section 2.2 and Section 4.2, respectively. The weighting factors corresponding to the market scenarios are detailed in Section 4.7.2; however, the basis for the weighting factors corresponding to the gap sizes could not be located in the Draft IRP.

There are a number of issues raised by this Table 6-8:

- the present value difference is reported to be \$0 in the two instances where Site C is not selected; however, these alternative portfolios would actually have a present value advantage over Site C and therefore a negative value needs to appear in these two cells;
- the overall weighted present value difference between Site C and the alternative portfolios can be determined by multiplying the gap size likelihood and the present value difference for the three gap sizes, and then summing the three numbers, which yields an expected weighted present value benefit of Site C of \$222 million;⁶

⁶ Considering the issue raised in the first bullet, namely that two of the scenarios actually have a negative relative present value, the weighted present value would be less than \$222 million.

- a present value advantage less than \$100 million (including two cases of disadvantage) occurs in 7 of the 15 scenarios, which collectively have a 58% likelihood of occurring based on the gap size and market likelihoods presented;
- a present value advantage greater than \$500 million also occurs in 7 of the 15 scenarios, but which collectively have only an 18% likelihood of occurring based on the gap size and market likelihoods presented;
- DSM 2 is the assumed DSM option, and no sensitivity analysis appears to have been undertaken to determine whether the use of DSM 1, 3, 4, or 5 would have lead to different results, and potentially different conclusions with respect to Site C; and
- a wind integration cost of \$10 is assumed, and no sensitivity analysis is undertaken to determine whether a higher or lower cost would have lead to different results or conclusions.

The \$222 million present value advantage to Site C needs to be viewed in its proper context. Over the 20-year analysis period, the Site C Project has a present value cost on the order of \$8.5 billion (see Table 6-9). In other words, the \$222 million weighted advantage represents about 2.6% of the present value cost of Site C. It is important to consider the fact that this is an “expected cost” for Site C and that actual costs will vary from those presented in the Draft IRP. Expected values do not properly represent the range of factors that could influence the costs of Site C (or the alternatives) higher or lower. In simple terms, there are no “error bars”. The reality is that the present values of portfolios with and without Site C are within ranges that overlap. This can be illustrated by looking at the construction capital cost of Site C which is on the order of \$2.5 to 3.0 billion. This feasibility-level estimate would have an error on the order of 10%-15%, meaning that the error in the construction capital cost estimate is on the order of \$250 to \$450 million, which is in excess of the supposed present value advantage of Site C. This range in the estimated present value of portfolios with and without Site C must also consider other factors such as interest rates, labour costs, and the relative risk of a single large project versus a large number of smaller supply-side and/or demand-side initiatives that compose the alternative portfolio.

In other words, based on the evidence presented in the Draft IRP, the recommendation to “build Site C...for the earliest in-service date” is not justified, since the range in the present values of portfolios with and without Site C overlap. No clear determination can be made to move forward or not move forward with Site C based on the information presented. The appropriate action is not to recommend Site C be built, but to continue with study of *both* portfolios with and without Site C. For this reason, it is not clear why BC Hydro would only be recommending moving forward with continued work on Site C and not also recommending moving forward to the same extent with work on the resources composing the alternative

portfolio. Based on the degree of uncertainty in the estimates of present value, the economic benefits are not meaningfully different between the portfolios with and without Site C to justify working only on the portfolio containing Site C.

Full Consequence Table for Site C. Table 6-9 presents, in generalized terms, a comparison of consequences for portfolios with and without Site C. While the Draft IRP acknowledges that the portfolio with Site C has a larger footprint on land and a lower expected cost, it fails to note the differences in the certainty associated with these findings. The effects on land, affected stream length, marine ecosystems and aquatic areas can be very accurately measured and are 100% certain to be better without Site C. Total GDP, employment, government revenue and cost (all of which are reported to be better with Site C) are based on complex models and numerous assumptions prone to error. These uncertainties in the modelling estimates are ignored entirely in the presentation in the Draft IRP. In other words, economic benefits contain substantive uncertainty making it impossible to distinguish in any meaningful way between the alternative portfolios, while the environmental benefits (see Table 6-9 and elsewhere in the Draft IRP) of the portfolio without Site C are substantial and certain.

Closing

Thank-you for the opportunity to provide comments on the Draft IRP. The T8FNs welcome further discussion and invite BC Hydro to contact my office to arrange a time for us to meet or to address any questions you may have concerning the issues raised in this letter.

Sincerely,



Tribal Chief Liz Logan

cc: Treaty 8 Chiefs Davis, Lilly, Tsakoza, Willson
Shona Nelson, Treaty 8
Trevor Proverbs, BC Hydro Site C Team

**Appendix 19 — First Nations Consultation Interim Report;
Section 5.0**

BC Hydro Integrated Resource Plan

First Nations Consultation
Interim Report

May 25, 2011



- At the end of all the sessions, to compile a formal response to BC Hydro on the BCFNEMC's perspective of the process and the issues they heard raised by First Nations.

5 FIRST NATIONS INPUT INTO THE DRAFT PLAN

First Nations provided input into the development of the draft Integrated Resource Plan at the regional workshops and through subsequent written comments. The BCFNEMC also provided key comments and recommendations in two separate documents, one relating to their involvement in the First Nations regional workshops, and the other relating to their involvement in the Technical Advisory Committee. The following sections outline the First Nations input received to date.

5.1 Input from First Nations Regional Workshops

The following is an overview of the input received from First Nations at the regional workshops, organized according to the six topic areas and based on the summaries of input from each regional workshop set out in (**Appendix 12**). In addition, a common theme at many of the workshops was consultation process and the input on this issue has been summarized in Section 5.1.7.

5.1.1 Conservation and Efficiency

BC Hydro sought to understand First Nations' perspectives on whether BC Hydro should pursue greater conservation and efficiency than it currently undertakes to further reduce the demand for electricity.

There was widespread support for greater conservation and efficiency, with the caveat that First Nations, many of who are economically disadvantaged, must not be burdened with higher electricity rates and unaffordable energy efficiency upgrades. The following are First Nations' comments and recommendations associated with the topic of conservation and efficiency.

5.1.1.1 Comments & Recommendations — Conservation and Efficiency

Rates

- There was significant concern that higher electricity rates would cause disproportionate financial hardship on First Nations' communities due to:
 - The higher incidence of poverty in First Nation communities.
 - Living conditions which include:
 - Poorly constructed homes which are not energy efficient;
 - Large and extended families living together;
 - Many unemployed people at home during the day using electricity; and
 - Electricity bills paid for by the band office not the user which does not provide incentive for individuals to reduce electricity consumption.

Affordability of Energy Efficient Upgrades

- There was recognition that becoming more energy efficient costs money and there was a significant concern that First Nations would have to pay for energy efficient upgrades when they cannot afford it.
- There was a concern that First Nations homes are below today's energy efficiency standards and to improve the energy efficiency of these homes will therefore cost even more than the average household.

Shared Responsibility between Industry, Business and Consumers

- There was the view that there should be shared responsibility for implementing conservation and efficiency efforts across households and industry.

Economic Growth and Conservation

- There was a perceived contradiction between the pursuit of a growth agenda (and a corresponding growth in energy consumption through exports or domestic use) and the goal of conservation.
- It was stated that the First Nation world view is that resources are a gift and must consider future generations.

Regional Rates Recommended

- The demand for electricity from large population centers like the Lower Mainland leads to greater impacts on First Nations' territories and First Nations who experience these impacts should not have to pay as much for electricity.
- A desire for rates that reflect where people live (e.g., higher in urban areas and lower in areas close to generation), their ability to pay, and overall use.

Education Recommended

- More education on conservation and efficiency and behavioural change within communities with a particular focus on First Nation youth.
- Community-based champions to be a voice for conservation and efficiency.
- Sponsor a competition for developing clean energy ideas or opportunities.
- Training First Nation people to undertake energy efficiency retrofits and upgrades.
- Having opportunities to learn from other First Nations who have successfully adopted conservation and efficiency and/or developed their own small scale supply options.

Financial Incentives and Funding Recommended

- Financial incentives to conserve, including opportunities to sell surplus electricity as a result of conservation efforts.
- The need for tax credits, funding and financial incentives to help facilitate change.
- Look at options that combine conservation and efficiency with development of small scale renewable supply options.
- BC Hydro should work with Indian and Northern Affairs Canada to improve energy efficiency of housing on First Nation reserves.
- There is a need to provide energy business development services to First Nations.

Energy Efficiency Upgrades

- BC Hydro should provide First Nations with studies on their energy efficiency of their homes and make improvements to them

Other Comments and Recommendations on Conservation and Efficiency

- There was concern about the environmental hazard of LED lights which contain mercury and lack of proper disposal facilities in First Nation communities.
- There was concern regarding the accuracy of BC Hydro meters as it was stated there have been cases where people have paid for more electricity than they have used.
- There is a concern regarding health hazards associated with electricity and electro-magnetic fields from transmission lines.
- There was an interest in getting communities on the grid or having them become self-sufficient through available resources such as streams, solar or wind.
- There was an interest in seeing BC Hydro become a champion of alternative fuel sources such as wood used in wood stoves.

5.1.2 Electricity Generation Options

As part of developing the Integrated Resource Plan, BC Hydro looks at available resource options (i.e. run-of-river; wind etc.) and will be creating portfolios containing various resource option combinations. The development of these portfolios is technical and involves BC Hydro's energy planners with input and advice from the Technical Advisory Committee (TAC) of which the BCFNEMC is a member.

In the first round regional workshops, BC Hydro presented three example portfolios to participants. The purpose of the example portfolios was to illustrate, in a non technical fashion, the key trade-offs that arise between broad electricity generation options and to seek First Nations' input in order to understand their general perspectives on these types of portfolios. The level of discussion on portfolios and specific resource options varied between workshops. At some

sessions First Nations participants provided comments on the specific example portfolios, but in most cases the input received was directed to the topic of electricity generation options in general, and by implication was applicable to all three of the example portfolios presented. None of the example portfolios received significant support from First Nations and there were many requests for more information on portfolios before expressing a preference. However, there was a general preference for developing clean or renewable resources with the exception of Site C. Many First Nation participants did not consider Site C “clean”. The following are First Nation comments and recommendations associated with the topic of electricity generation options.

5.1.2.1 Comments & Recommendations — Electricity Generation Options

Impacts

- There were repeated reminders that First Nations have experienced the impacts of generation resource development and related transmission infrastructure without a corresponding benefit.

Developing Portfolios

- There was reluctance on the part of many participants to provide feedback on the portfolios because they did not know how the Integrated Resource Plan would ultimately affect their community.
- There was concern that First Nations are only being presented example portfolios and not all of the hundreds of portfolios developed by BC Hydro, including the associated data such as cost, length of transmission lines, socio-economic, community and environmental impacts.
- There was a concern about the complexity of the information and that portfolios have been developed without input from First Nations and their community members.
- There was a concern that certain resources, such as solar and geothermal are not included in the example portfolios.

Preference for Planning from a First Nations’ Territory View

- There was a preference for planning from a First Nations’ territory view.

- Regardless of the resource type there was an interest in early and meaningful involvement of First Nations in the planning and development of resources.

Planning Considerations Regarding Electricity Generation Options

- Electricity rates were a significant concern for First Nations, it was noted that many First Nations are living in poverty and cannot afford rate increases.
- There was a concern about the environmental impacts of resource development on First Nations' way of life.
- There was a lack of confidence in the environmental assessment process.
- There was an interest in First Nations' land use planning.
- Economic development for First Nation communities was considered to be an important consideration in the planning of the Integrated Resource Plan and there was significant interest in BC Hydro's power acquisitions processes.
- There was an interest community based /regional generation (i.e. distributed generation) and an interest in taking a regional approach to the portfolios where the types of resources developed would depend on the resource available in the region.
- It was asserted that there should be an acknowledgement of First Nations' title and rights to resources in the planning process.
- There was a preference to include particular resource options in the portfolios – (i.e. solar, biomass, natural gas, geothermal, wave and tidal).
- There is a concern about the impacts of the development of renewable resources (not just fossil fuels).

Site C

- There was substantial opposition to Site C. Many First Nations who are not in the area of the proposed Site C project expressed solidarity with the position of the First Nations who will be affected by Site C.

Other Comments and Recommendations on Electricity Generation Options

- There was a concern about the impact of climate change on energy resources.
- There was concern about the impact of transmission lines on rights and title.
- BC Hydro should make reliability of the electricity system a priority. There was a concern about service interruptions and the impact on First Nations communities.
- BC Hydro should provide participants with GIS maps of the grid and areas of renewable energy potential that can be used by First Nations in their own land use mapping.
- Electricity planning should be separated from generation development, similar to the Ontario model because it was believed that there is a conflict between electricity planning and generation development as more generation results in more revenue from electricity sales.

5.1.3 Electrification

One of the B.C. energy objectives in the *Clean Energy Act* is to encourage switching to energy sources which decrease greenhouse gas emissions in B.C. One way to reduce green house gas emissions is by switching from fossil fuel energy to electrical energy derived from clean generation sources. Electrification describes the process of switching from one energy or fuel source to electricity (e.g. switching from gasoline and diesel to electric vehicles). BC Hydro sought to understand First Nations' perspectives on whether BC Hydro should take a proactive approach to encouraging electrification.

The input of First Nation participants' regarding the topic of electrification varied. There was both support and opposition to taking a proactive approach to electrification while others questioned the relevance of this topic to the First Nation reality. The following are First Nation comments and recommendations associated with the topic of electrification.

5.1.3.1 Comments & Recommendations — Electrification

- Electrification is of questionable relevance to First Nations communities. There is a “disconnect” between this planning issue and First Nations circumstances.
- There was a concern about the impact electrification would have on electricity rates.
- BC Hydro should consider the impact of electrification on demand for electricity.
- There was a concern about the environmental impact associated with electrification and the difficult choices that come with a desire to reduce greenhouse gas emissions versus expanding the impact on the land in order to support the generation of new non-thermal electricity sources.
- There was a perception that electrification will mainly benefit urban areas and will disproportionately impact First Nations in rural areas.
- There was a perception that there are conflicting policy objectives particularly with respect to reducing green house gas (GHG) emissions and at the same time providing electricity to operations that extract carbon emitting natural gas for domestic sale or export.
- There was a concern about industrial and commercial demand for electricity.
- There was a concern about the reliability of the transmission and distribution systems as reliance on electricity increases.
- There was a concern about the impact of increased use of electricity on health (EMF).
- There was a concern that costly investments in technology now could be unnecessary because there is uncertainty about which evolving technologies will be most attractive in the future.
- There was an interest in BC Hydro’s efforts to promote the electric vehicle and a greater interest in electric trucks than electric cars.

- Consider providing consumers with the option of locking in their rates to protect them from the expense associated with electrification.
- It was recommended that a market study be undertaken to determine who will benefit and therefore who should pay.
- It was stated that Government not BC Hydro, should make the decision on whether to pursue a proactive approach to electrification.
- It was recommended underground distribution lines be installed which would improve reliability of the electricity system in extreme weather conditions.
- Electrification will increase reliance on electricity which increases the importance of reliability, so improve reliability.

5.1.4 Transmission Planning

The transmission system is an essential link between electricity generators and energy consumers and is an important component to developing an Integrated Resource Plan. Transmission lines are designed to deliver energy efficiently and reliably and require long lead times to plan and construct. The Integrated Resource Plan assesses the demand forecast and the transmission options that will most effectively meet those demands over the next 30 years. The critical question to be addressed in the Integrated Resource Plan is the extent to which BC Hydro should consider, plan and build transmission lines in anticipation of potential future need (proactive) or in response to forecast need (responsive).

BC Hydro sought to understand First Nations' perspectives on whether it should take a proactive approach to transmission planning in the development of the Integrated Resource Plan.

With some exceptions, there was a general preference for a proactive approach to transmission planning. The following are First Nations' comments and recommendations associated with the topic of transmission planning.

5.1.4.1 Comments & Recommendations — Transmission Planning

Responsive vs. Proactive Approach to Transmission Planning

- Participants were generally in favour of a proactive approach to transmission planning provided it was done with the involvement of the affected First Nations. However, there was at least one participant who supported the responsive approach because they thought it would involve lower short term costs.
- It was also expressed that the responsive vs. proactive approach to transmission planning is a technical issue and it was questioned why First Nations' input is being sought on this technical issue.

Impact of Transmission on First Nation Lands

- There was significant amount of discussion on the existing impacts from transmission without any corresponding benefits (i.e. communities that were impacted by transmission lines but not connected to the grid; the access that transmission lines create in First Nations' territories).
- Accommodation for new and existing lines and revenue sharing was raised.
- There was a significant concern about the historical impacts of existing transmission infrastructure and the lack of accommodation.
- There was a perception that transmission disproportionately affects First Nations and land users/owners.

Environmental Impacts

- There was concern about the environmental impacts of building new transmission lines and maintaining existing transmission lines through vegetation management.

Economic Development

- There was an interest in the economic development benefits to First Nations from planning transmission in their territory.

Consultation with First Nations and Accommodation

- There were repeated comments about the requirement to consult with First Nations on transmission. There were several statements relating to the content of consultation:
 - Compensation for past and future projects;
 - Informed consent of First Nations; and
 - Speak to all First Nations in the province regarding their perspective on development in their areas.
- There was a concern related to consultation in that First Nations governments are bound by Certificates of Possession land holders on some of their reserve lands which makes finding workable right-of-ways more difficult.
- There was a concern about health hazards believed to be associated with electricity and electro-magnetic fields from transmission lines.

Other Comments and Recommendations on Transmission Planning

- Provide GIS data of right-of-ways so First Nations can overlay this on their own GIS maps.
- Maximize the use of existing transmission lines and corridors to minimize additional impacts.
- Plan where not to put transmission lines.
- Compensate First Nations for future and historical impacts of transmission lines within their traditional territories. It was suggested that First Nations with transmission lines in their territory should pay discounted electricity rates.
- Include DC transmission lines as an option because they are believed to save money and have less impact on the environment.

5.1.5 Export Market Potential

While BC Hydro currently trades electricity when it has a short-term surplus, the *Clean Energy Act* includes the B.C. energy objective that the Province be a net exporter of clean or renewable power. The *Clean Energy Act* requires the Integrated Resource Plan assess the export market potential, including the share

of the clean energy market that B.C. could expect to capture, and make recommendations to the provincial government about what actions need to be taken. In its consultation with First Nations to date, BC Hydro has sought to understand First Nations' perspectives on whether BC Hydro should acquire renewable energy from independent power producers in British Columbia for the sole purpose of exporting electricity to other jurisdictions. This new approach to export is distinct from the current approach to export which involves selling surplus energy from generation facilities built or acquired by BC Hydro to meet domestic need.

Some participants in the workshops expressed opposition to acquiring renewable energy from independent power producers for the purpose of export, but there were many who expressed support provided that First Nations share in the benefits through revenue sharing, ownership interest in the export projects, and reduced electricity rates. The following are First Nations' comments and recommendations associated with the topic export market potential.

5.1.5.1 Comments & Recommendations — Export Market Potential

- There was an interest in First Nations becoming full participants in export including revenue sharing and jobs.
- There was concern about the impacts of generation and transmission development on First Nations right and title.
- There was concern about the impact of export on the environment.
- It was indicated that it is one thing to expect First Nations to incur impacts and agree to the development of transmission lines to satisfy needs of the province and another to provide export opportunities where only a few companies will benefit.
- There was an interest in seeing ratepayers protected from financial risk of export and any consequent rate increases. Conversely there was also an interest in ratepayers sharing in the benefit of exports through rate reductions.
- It was perceived by some that domestic transmission costs cannot be separated from the cost of export.

- There was an interest in assuring domestic supply at competitive rates and a corresponding concern that domestic supply may be subordinated to export opportunities. Concerns about the implication of the North American Free Trade Agreement (NAFTA) were specifically raised.
- There was a concern that after an energy purchase agreement expires, independent power producers can sell to highest bidder which could result in increased rates.
- There were concerns that export of electricity conflicts with the goal of conservation and efficiency and that other jurisdictions do not share B.C.'s view on conserving energy. There was an interest in seeing the same clean energy standards in other jurisdictions that we export electricity to.
- A participant expressed frustration with BC Hydro and thought that BC Hydro would do what it wanted regardless of First Nations input.
- There was an interest in developing solar for export.
- It was questioned whether BC Hydro is actually a net importer of electrical power, since it is unclear how BC Hydro's practices of buying and selling electricity on the spot market affects its position as a net importer or exporter of electricity.
- There should be consultation with the local First Nations when a project is built for export.

5.1.6 Clean or Renewable Energy Development in First Nation Communities

One of the energy objectives in the BC *Clean Energy Act* is to foster the development of First Nation and rural communities through the use and development of clean or renewable resources. BC Hydro sought to understand First Nations' perspectives on clean and renewable energy development in their communities.

There was substantial interest in creating revenue and jobs for First Nations communities through participation in clean or renewable energy development. There was also substantial interest in connecting remote communities to the

electricity grid or alternatively having remote communities achieve energy self sufficient through clean or renewable generation projects. The following are First Nations' comments and recommendations associated with the topic of clean or renewable energy development in First Nation communities.

5.1.6.1 Comments & Recommendations — Clean or Renewable Energy Development in First Nation Communities

Business and Employment Opportunities

- There was significant interest in business and employment opportunities with BC Hydro.

Supply Clean or Renewable Energy to Remote Communities

- There was interest in providing clean energy supply to off-grid remote communities by either connecting them to the grid, or alternatively, developing renewable energy to replace diesel generation.

Revenue and Jobs from Clean or Renewable Energy Development

- There was significant interest in both revenue and jobs that could potentially result from clean or renewable energy development.

Develop Capacity in Clean Energy Development with Assistance from BC Hydro

- There was a focus on developing capacity within First Nations' communities (with the assistance of BC Hydro) so that First Nations could effectively participate in clean or renewable energy development.

Partnerships between First Nations and BC Hydro and Revenue Sharing

- There was significant interest in BC Hydro and government partnering with First Nations on clean energy development by entering agreements on the following:
 - Revenue sharing and accommodation;
 - First Nations' ownership in projects;
 - Respect for First Nations' approval processes; and
 - A right of first refusal on a project by a First Nation.

First Nations and Independent Power Production

- There were many comments and recommendations regarding BC Hydro's power acquisition processes:
 - Some participants expressed frustration about their lack of success in obtaining energy purchase agreement with BC Hydro.
 - A related concern that BC Hydro was not paying enough for electricity purchased from independent power producers.
 - Frustration with the cost and complexity of the power acquisition process;
 - It was indicated that the power acquisition process strains the resources of First Nations proponents.
 - The strain of power calls on First Nations is compounded when they are asked to consult with multiple proponents. This is particularly troublesome when they know that many proponents will not move forward with building the projects.
 - There was concern expressed about the cost and BC Hydro's decision making regarding access to the grid.
 - There was an interest in receiving more support from BC Hydro for First Nations involvement in energy development.
 - There was a concern about the consultation process for power acquisitions from independent power producers. One participant wanted BC Hydro to set clear guidelines about how First Nations should be consulted on projects seeking an Energy Purchase Agreement with BC Hydro.
- There was some opposition to independent power producers and their impact on the environment and aboriginal rights and title.

Resource Options for Clean or Renewable Energy Development

- There was interest expressed in developing specific resource options, including biomass, wind, solar, geothermal and cogeneration.

Environmental Considerations

- There was an interest in seeing proponents involve First Nations in their projects so their projects are consistent with First Nations' values and land use plans.

Definition of Clean and Renewable Energy

- There were objections to the definition of clean and renewable energy and many First Nations were of the view that Site C is not clean or renewable.

BC Hydro's relationships with First Nations and Historical Grievances

- There are unresolved historical grievances that affect BC Hydro's relationship with some First Nations and make it more difficult for these First Nations to work together with BC Hydro on clean or renewable energy development opportunities.

Incentives for First Nations involvement in Clean or Renewable Energy Development

- Undertake a feasibility study (with the involvement of key people) to determine how best to create incentives for First Nations involvement in Clean or Renewable Energy Development.

Carbon Credits

- Provide First Nations with carbon credits from projects that are located in their traditional territory.

Capacity

- It was recommended that capacity and advisory services be provided to First Nations to participate effectively in clean or renewable energy development.
- Study successes involving First Nations and independent power production.

Business and Employment Opportunities with BC Hydro

- Require BC Hydro contractors to employ a certain percentage of First Nations labour.

Other Comments and Recommendations on Clean or Renewable Energy Development in First Nation Communities

- There was interest in business opportunities relating to the disposal of LED blubs.
- There was an interest in business opportunities relating to implementing conservation measures.

- There was interest by one participant in a benefit package relating to the Northwest Transmission Line.
- It was recommended that BC Hydro have a First Nations only power acquisition process.
- BC Hydro should be involved in a proponent's consultation with First Nations on projects that are being submitted into BC Hydro's energy acquisition programs.
- It was recommended that BC Hydro create a fast track process for First Nations' independent power projects.

5.1.7 First Nations' Comments on BC Hydro's Consultation Process

At several of the regional workshops participants expressed significant concern about the First Nations consultation process for the Integrated Resource Plan. Many participants did not consider the process "consultation" and there was a wide range of views regarding what was required for consultation to occur. The following is a summary of the input BC Hydro heard on the consultation process for the development of the Integrated Resource Plan.

- Many participants stated that they did not consider BC Hydro's approach to be consultation.
- Only one participant acknowledged that the process was consultation.
- There was a concern about calling the process "consultation" because of the legal implications of the word.
- Many participants said that the process could not be consultation without accommodation.
- It was indicated that consultation requires an understanding of the impacts and environmental impact of the Integrated Resource Plan at the territory level.
- There was an interest in approaching planning from the community, territorial level, before planning at the province-wide level.

- It was indicated that accommodation requires recognition of aboriginal rights and title in the planning process.
- It was stated that revenue sharing is a key component of accommodation.
- Many participants were of the view that the Integrated Resource Plan requires deeper consultation.
- It was indicated that there is a need for more information on the Integrated Resource Plan, including its technical components and the capacity to understand technical information.
- It was indicated that there must be a partnership in decision-making with earlier involvement of First Nations, including pre-planning discussions about process.
- It was stated that there must be political level decision making involving senior leaders from BC Hydro and the Province.
- It was stated that consultation must occur at the community level.

Observations on Consultation

- There was concern that First Nations do not have access to the BC Utilities Commission process in the development of the Integrated Resource Plan.
- It was stated that consultation can be unique to different First Nations.
- There was an interest in BC Hydro policy on consultation and accommodation.
- The United Nations declaration on Indigenous Rights, relationship building and respectful communication were all identified as important to consultation.

Consultation Schedule

- There was concern expressed about the schedule for consultation. The timeline to develop the Integrated Resource Plan and the related consultation is too short and there is too long a time gap between the first and second rounds of regional workshops.

Stage in the Process First Nations are being Consulted

- There was recognition and appreciation by some participants that BC Hydro was consulting before a draft plan was developed; other participants stated they believed a draft plan had already been developed.
- It was stated that there must be a partnership between First Nations and BC Hydro in decision-making along with much earlier involvement of First Nations in the decision making process.

Future Impacts to First Nations' Rights and Title that may Arise from the IRP

- It was unclear to participants what the implications of the Integrated Resource Plan will be to First Nations' rights and title.
- There was concern that the Integrated Resource Plan would be used to justify later decisions, such as Site C.
- It was asserted that Site C cannot be developed without the prior consent of Northern First Nations.
- There was a concern about the relationship between the Integrated Resource Plan and the project review and approval process for Site C. There was a concern that the process favours approval of the project.

Historic Grievances

- Past grievances must be addressed and compensated before discussing future plans.

Site C

- It was stated that Site C is the only large project being considered and that some First Nations need to be engaged at a different level, which it was noted was not happening here.

5.1.7.1 Attributed Comments Regarding the Consultation Process

BC Hydro explained to the participants in the regional workshops that the note-taker would not be attributing comments unless a specific request was made by a participant to have a comment attributed to their First Nation. The following are

comments made during the workshops where the participant asked that the comment be attributed.

Harold Harry, Canoe Creek [Kamloops]

I have concerns with this being First Nations consultation. We are not here for consultation. We understand this to be information sharing. The obligation rests somewhere else, not here.

Gary Alexcee and Don Roberts, Kitsumkalum Band [Terrace]

Today's session has been described as consultation but it is not consultation to Kitsumkalum Band. Proper consultation needs to come home to our office and to our managing team, treaty and band on putting our imprint into any management plan.

Chief Carol Ann Johnny, Dease River First Nation [Terrace]

I consider this as an information session to be introduced to the Integrated Resource Plan. Our definition of consultation is different from BC Hydro's. I consider this information sharing.

Chief Larry Nooski, Nadleh Whut'en [Prince George]

I would like to state that I am not here for consultation. I have a serious problem with someone coming to our territory and talking consultation without accommodation. Whenever there are activities in our territories it creates damages. In 1956, Alcan came to our territory and destroyed our river. We have been here since 1272 A.D. and we have been fishing. In 1911 we stopped because people consulted with us and we let them in to share our resources, but we have gotten nothing from them. Anything we have ever got from the governments is welfare, disease and damage to our territory. I have a problem when someone says they are consulting without accommodating for the damages that will be and has been occurring.

Chief Geronimo Squinas, Lhatko Dene Nation (Red Bluff) [Prince George]

I would like to go on the record to say that my community and I do not see this as consultation and we would like BC Hydro to come to our community and talk to my members.

Jackie Brown, Lheidli T'enneh [Prince George]

I do not consider this consultation. Be proactive in having discussions with Lheidli T'enneh. Not just your administrative staff but to speak at a higher level.

Carrier Chilcotin Tribal Council, Bert Groenenberg [Prince George]

As an employee, I am not representing any member communities or their First Nations, so we are not consulting on their behalf and I am just here to receive information.

Kwadacha, Nak'azdli, Tsay Keh'dene, Gitxsan, Takla Lake, Nazko, Lake Babine Nation, Nadleh Whuten, Lheidli T'enneh [Prince George]

We do not consider this to be consultation.

Chief John Ridsdale, Wet'suwet'en [Prince George]

I am getting confused here. I absolutely get what you just said, this is the same story. You are going to get a 60 per cent rate hike but we will save 30 per cent. Where is anything for First Nations, what about compensation? We know what they are going to do, they are going to sell energy, and it is a corporation. Everybody has been through this process and it is the same old thing. You take notes and bring it back to your headquarters. You are affecting peoples land and rights and there should not be a dollar figure put on that. British Columbians want surety but you cannot get that at the expense of First Nations. You are getting great feedback because it is the truth. We know there are plans out there. When it comes to First Nations consultation, when you go to the public are they put first and foremost and you just switch it to who you meet with? There are certain criteria that industry and government must meet before they move forward with anything on First Nations. When you get into BC Utilities Commission, BC Hydro, and government, they tell you to speak to different people and the wheels are spinning and we cannot get on board. It is the same old story and this is the truth. Please be truthful with us.

5.2 Written Comments from First Nations

BC Hydro received written comments from First Nations in three ways: the First Nations Input Form; reports from the BCFNEMC; and additional letters and emails received from First Nations, Tribal Councils and First Nations Organizations.

5.2.1 Comments Received in First Nation Input Forms

The verbatim written input that BC Hydro received from First Nations in the Input Forms is set out in the tables below and organized by topic.

5.2.1.1 Conservation and Efficiency

The input received on conservation and efficiency is set out in Table 5.2.1.1.

Table 5.2.1.1 Input on Conservation and Efficiency

First Nation	Considering the information provided what do you think about pursuing greater conservation & efficiency?	What are your First Nation's interests that BC Hydro should consider if it were to pursue greater conservation and efficiency?
Bonaparte Indian Band	Energy gaps are still prominent, management of water efficiency within First Nations has been drastically reduced over the past 20 years and yet demand for electricity is expected to grow 40% over the next 20 years.	The conservation of water and supply efficiency to clean water for not only our wildlife, riparian rehabilitation but to also to the domestic use. Increasing damn usage generating electrical supply in the remote northern areas of BC are affecting the interior tribes/bands of the province.
Kwakiutl District Council	May benefit BC Hydro customers (lower hydro bill) individual, but overall growth (e.g. new households) will negate conservation benefit. Hard sell if more electricity overall is being consumed At odds with 'growth' economy Efficiency-Local opportunity for self-generation and sale of excess power to BC Hydro Just 'moving' peak demand from one time period to the other."	"Opportunity for generating electricity (and sale) locally. (feed in Tariff opportunities) Assistance with exploring energy efficient building design (new and retro-fits of homes) Local/household electricity generation opportunities a bigger incentive than efficiency savings"
Little Shuswap Lake Indian Band	Conservation and efficiency should be target #1. A workable system of incentives and disincentives should be implemented. The prevailing policy that all demands should be met needs to be re-examined with a particular focus on the questionable notion of unlimited growth.	We are highly concerned with the limited options presented, in particular the emphasis on IPP's. While the logic of a more diverse power supply is relatively strong on a number of issues, the current situation with IPP's and the commodification of water is very troublesome.

First Nation	Considering the information provided what do you think about pursuing greater conservation & efficiency?	What are your First Nation's interests that BC Hydro should consider if it were to pursue greater conservation and efficiency?
Samahquam	It is important! We have to do what it takes to protect our World for our next generations. Will it be a tax right off? To apply conservation rates require transparency and policies where this would apply or (Not Apply) to low income families. What relationship exists w/ social development ministry? What is CMHC input on this?	*Make these efficiencies available to FNs: Resource the. Make "Save the Planet" mandate Affordable! Promote Building code requirements inspection: renovations and new construction
Toquaht Nation	The Toquaht Nation believes in the necessity to pursue greater conservation and efficiency.	Toquaht has expansion plans for its community - we are interested in building energy efficient homes and buildings.
Tsawout First Nation	Yes we feel this is definitely the path that BC Hydro should pursue.	The interests that we wish to protect in our territory is less destruction of the environment and resources in our territory
Tsawwassen First Nation	In general, Tsawwassen is supportive of conserving electricity; however there are significant issues with "Conservation Rates" (e.g. increasing block pricing) and feel that they need to be adjusted to address equity issues. In First Nations communities any conservation rate policy must consider the poor quality of First Nations housing stock, the large family size, and the low annual incomes. First Nations housing in general, including much of that in Tsawwassen, is substandard. Difficulties in acquiring financing on reserve lands make it difficult to upgrade homes. In the absence of financing to perform upgrades, many First Nations Members will be unable to pay Hydro bills, and given the inefficiencies with their houses, they will incur large bills. Also, First Nations families tend to have larger families. This means that on average they draw more power per household. Also, average annual income among Tsawwassen families is lower than the regional average, meaning that increasing hydro rates will have a greater impact on our Members.	If a strategy of more conservation rates is pursued, it is crucial that BC Hydro provide sufficient funding for housing retrofits for First Nations communities that would reduce the impact of higher rates on low-income members. In the absence of such funding, Tsawwassen is not supportive of that plank of a conservation strategy.

5.2.1.2 Electricity Generations Options

In the Input Form BC Hydro provided three example portfolios of electricity generation options. First Nations were asked to provide their perspectives on these example portfolios.

5.2.1.2.1 Example Portfolio 1: Renewable Mix

The input received on Example Portfolio 1: Renewable Mix is set out in Table 5.2.1.2.1

Table 5.2.1.2.1 – Input on Example Portfolio 1: Renewable Mix

First Nation	Considering the information provided what do you think about this example Portfolio?	What are your First Nation’s interests that BC Hydro should consider with respect to this example portfolio?
Bonaparte Indian Band	Because most of the First Nation communities are assigned adjacent to run-of-river geographies under the implication that the reserves have arable lands. This portfolio will automatically be the most expensive for any First Nation community as a result of the intermittent water body levels from area to area.	Will need to definitely define a number of trade-offs for backup resources to sufficiently and adequately supply electricity and water for all First Nation residence assigned adjacent to run-of-river geographically.
Kwakiutl District Council	<p>"How much of the mix is 'un-firm' power; and how much firm power will need to be generated for establishing a buffer?</p> <p>What is the potential for local/household electrical generation and how much additional 'firm' buffer would be required?</p> <p>What are the electricity consumption projections for next 20 years; will this portfolio (1) be enough?"</p>	<p>"Whatever the mix; energy development within a First Nation's must respect the Nation's vision for the use of the land.</p> <p>Whatever, the mix; any energy developments will have to reach accommodation agreements with affected First Nations"</p>
Little Shuswap Lake Indian Band	Although this should not be construed as a blanket endorsement of IPP's, windpower, and/or bio-generation, or any other proposed alternatives, it does mean that alternative power generation should be aggressively and creatively pursued. There are many emerging technologies coming onstream that are not mentioned at all in this process. Furthermore, the associated cost for this alternative is not based on true cost accounting. In fact, none of the costing in this exercise is based on true cost. The cost inputs, by design, are very narrow and seem to promote an agenda already determined by BC Hydro and the Province to be optimal according to their own needs and ideologies.	IPP's should, at a minimum, only be developed with full participation of First Nations. Other alternative power sources, which will be predominantly located in Aboriginal Interest Areas and as such will trigger the commitment "Title" questions, must also be developed with the full involvement of First Nations.
Toquaht Nation	There are obvious pros and cons to this portfolio	Toquaht is interested in 4 run-of-the-river power generating sites within its territories. These would largely produce power during high usage winter months as our streams do not freeze up.

First Nation	Considering the information provided what do you think about this example Portfolio?	What are your First Nation's interests that BC Hydro should consider with respect to this example portfolio?
Tsawout First Nation	This example is more environmentally friendly therefore would get more support from the Tsawout First Nation.	Projects in our territory that take up resources, require lands or have an environmental impact require a fully informed and equitable consultation process with the Tsawout First Nation
Tsawwassen First Nation	Given the limited information, it is difficult to provide significant input.	<p>"It is our view that there should be space for First Nation's specific projects made within this portfolio mix. For example, if there is to be a significant amount of IPP's, the portfolio mix should mandate that some minimum percentage of those projects would have to be developed in partnership with First Nation's communities.</p> <p>While costs in and of themselves should not be a barrier to moving towards more sustainability and lowering emissions, the questions of who pays and who benefits are important. The cost impacts on First Nations must be considered, again given that the housing quality and the average family size on Reserves make it difficult to reduce energy consumption."</p>
Ucluelet First Nation	Next best option to Portfolio 2	

5.2.1.2.2 Example Portfolio 2: Renewable Mix with Site C

The input received on Example Portfolio 2: Renewable Mix with Site C is set out in Table 5.2.1.2.2

Table 5.2.1.2.2 –Input on Example Portfolio 2: Renewable Mix with Site C

First Nation	Considering the information provided what do you think about this example Portfolio?	What are your First Nation’s interests that BC Hydro should consider with respect to this example portfolio?
Bonaparte Indian Band	The interior First Nation Communities already do not have adequate supply for general use and greatly rely on the capacity of back-up resources. To have Portfolio#2 considered for the Interior nations with poor water supply would not really benefit any of the small rivers, creeks or low wind supply areas.	Consider planning an individual generated back-up system/resource for the small interior First Nation communities to always have a supply of electrical energy on demand regardless of the amount of water supply or a source of water within the reserve boundaries.
Kwakiutl District Council	"Are there other system storage opportunities besides Site C? What are the smaller hydro dam opportunities remaining in the Province?"	"Whatever the mix; energy development within a First Nation's must respect the Nation's vision for the use of the land. Whatever, the mix; any energy developments will have to reach accommodation agreements with affected First Nations"
Little Shuswap Lake Indian Band	"The flooding of another important and productive valley should not even be considered. The loss of the Columbia system for fisheries, hunting, gathering, not to mention agriculture, tourism and recreation values is still far from resolved Another mega-project and consequently vulnerable generation facility is definitely not cutting edge. In terms of system design and management, this is an antiquated approach. We see from any number and scale of examples that diversity is key. Why does BC Hydro think they are exempt from this operating principle? The same comments from above re: true cost accounting are relevant here, and throughout this response."	As in all of these, Rights and Title questions are far from settled, and will be triggered by all of these alternatives.
Toquaht Nation	Toquaht likes this portfolio in that fewer green house gases are produced and hence less impact on the environment	Again we are interested in 4 run-of-the-river projects that would tie-in to this proposal.
Tsawout First Nation	Example 1 was more agreeable with us even though Site C is questionable in regard to us supporting this option. Example 2 is a second choice of options that you have made available.	Any projects that impact our territory require fully informed and equitable consultation.

First Nation	Considering the information provided what do you think about this example Portfolio?	What are your First Nation's interests that BC Hydro should consider with respect to this example portfolio?
Tsawwassen First Nation	"Given the limited information, it is difficult to provide significant input. That said, consideration of the impacts of site C on aboriginal rights and title in the Peace must be considered. Beyond likely incremental impacts of a large scale hydro facility, the same comments provided above in respect of portfolio 1 apply."	As in respect of portfolio 1.
Ucluelet First Nation	Support this as long as there are strong planned commitments to the wind/small hydro/wave portfolios which include more realistic pricing structures to promote and catalyze development.	greater support for renewable development in other regions of the province

5.2.1.2.3 Example Portfolio 3: Renewable Mix with Site C and Gas-fired Generation

The input received on Example Portfolio 3: Example Portfolio 1: Renewable Mix with Site C and Gas-fired Generation is set out in Table 5.2.1.2.3

Table 5.2.1.2.3 Input on Example Portfolio 3: Renewable Mix with Site C and Gas-fired Generation

First Nation	Considering the information provided what do you think about this example portfolio?	What are your First Nation's interests that BC Hydro should consider with respect to this example portfolio?
Bonaparte Indian Band	Natural gas generation will need to be safely stationed outside of any main village or individual residence for safety of any leak or possible explosion due to unforeseen circumstance. But I do like the idea of the 93% Clean Energy Act target.	Should consider the possible cost of Natural Gas as it is subject to the uncertainty of natural gas and carbon emission prices. Most First Nation communities can barely meet their heating expenses due to the location and the lack of available employment for each residential unit utilizing this portfolio - cost could be to grad for payment monthly.
Kwakiutl District Council		"Whatever the mix; energy development within a First Nation's must respect the Nation's vision for the use of the land. Whatever, the mix; any energy developments will have to reach accommodation agreements with affected First Nations"

First Nation	Considering the information provided what do you think about this example portfolio?	What are your First Nation's interests that BC Hydro should consider with respect to this example portfolio?
Little Shuswap Lake Indian Band	Most strongly oppose this option, again with the strong objection that this entire exercise does not incorporate a full suite of alternatives and real cost accounting.	In addition to the previous comments re: Rights and Title, most of the requirements for additional power will be coming from the urban population base concentrated in the lower mainland. Any move towards reducing the rest of BC to a resource mine for the city dwellers is not only highly objectionable, it is a very short sighted view of the direction we should be taking as a society.
Toquaht Nation	Toquaht does not like the concept of increased gas fired generation. We are concerned with additional emissions and also the anticipated increases in cost of gas & oil from American desire to reduce dependence on offshore sources.	Again we have 4 run-of-river sites that produce most in high demand periods with open winters on the west coast of Vancouver Island.
Tsawout First Nation	The inclusion of Gas fired generation makes this option disagreeable with the Tsawout First Nation.	Any projects or plans that have an impact on our territory or environment require a fully informed and equitable consultation process.
Tsawwassen First Nation	Given the limited information, it is difficult to provide significant input.	In general, TFN believes there is a net benefit to reducing greenhouse gas emissions,- but care must be taken to ensure that the relative cost impacts are not greater on First Nations communities than they are on other British Columbians. When considering relative cost impacts, it is important to consider the percentage of a household's income spent on energy generation.
Ucluelet First Nation	Not a good idea.	

5.2.1.3 Electrification

The input received on electrification is set out in Table 5.2.1.3.

Table 5.2.1.3 Input on Electrification

First Nation	Considering the information provided what do you think about pursuing a proactive approach to encouraging electrification?	What are your First Nation's interests that BC Hydro should consider if it were to pursue a proactive approach to electrification?
Bonaparte Indian Band	Chances of a First Nation individual purchasing an electric vehicle is very low and to have to assist with increased electrical usage payments as a result of the additional need for electricity would be a burden of seeking the finances for a product no First Nation member can ever afford.	Consider that First Nation communities will be a part of the formula of governmental regulations when the increase in electricity rates are generated as a result of the electrical vehicles BC Hydro and government are partnering to encourage reducing green house gas.
Kwakiutl District Council	"Will increase demand; impact conservation goal How much more demand would be created?"	Again; will increase land use pressure-more land needed for electricity generation; must fit within Nation's land use vision
Little Shuswap Lake Indian Band	Although electrification in relation to greenhouse gas emissions looks beneficial, the increased power generation and the corollary de-emphasis on alternative means of propulsion results in a less than optimal outcome.	Electric vehicles for a rural setting are far from mature in their development, and as such have very little cachet or draw among remote and/or isolated First Nations communities. Once again, we will be asked to sacrifice land and environment to create a better life for urban dwellers.
Toquaht Nation	Anything to reduce green house gas production is felt to be a good thing by the Toquaht Nation.	Increased electricity rates would improve opportunities for the Toquaht's run-of-river projects.
Tsawout First Nation	We think BC Hydro needs to investigate this avenue fully.	"Same answer as given previously to this question".
Tsawwassen First Nation	Significant public sector investment (including investment by BC Hydro) should not be contributed UNLESS the market has clearly indicated that electric vehicles and the like are going to be 'winners' over other alternative fuel technologies (e.g. fuel cell). Given the current uncertainty over what type of technology will 'win' in the market, significant capital investments of public dollars does not make sense.	While it may not affect TFN, care should be taken to avoid the regional impacts of such a strategy. More remote First Nation's would likely not see any benefits to this policy over the medium- to long-term.
Ucluelet First Nation	Yes for sure, however rather than raising utility rates these infrastructure projects should be funded from gas tax, car sales tax, and a stronger commitment to federal CAP & trade policy & commercial exchange systems.	dedicated electric public transit lanes on Tofino-Ucluelet corridor

5.2.1.4 Transmission Planning

The input received on transmission planning is set out in Table 5.2.1.4.

Table 5.2.1.4 Input on Transmission Planning

First Nation	Considering the information provided what do you think about a proactive approach to transmission planning?	What are your First Nation's interests that BC Hydro should consider if it were to pursue a proactive approach to transmission planning?
Bonaparte Indian Band	It sounds like the transmission in bulk would better serve the interior First Nations communities significantly but would need surrounding communities to support 100% in order for the plan to be successful for all electrical consumers.	Significant potential benefits with a high risk and increased rate pay to benefit from the transmission plan - a cost that most First Nation communities are under funded presently and have been continually ignored when seeking economic development or settlement of infringements of our Rights and Title within the transmission footprints already in place.
Kwakiutl District Council	Before planning transmission discuss with affected First Nations to determine if additional transmission and subsequent generation fits in land use vision	BC Hydro transmission lines should also have had negotiated Impact Benefit Agreements
Little Shuswap Lake Indian Band	Local generation, locally owned and run, coupled with a decrease in reliance on a monolithic corporate and infrastructure approach makes more sense.	Any planning has to be done with the direct and meaningful involvement of First Nations. Emphasis on "meaningful".
Toquaht Nation	Planning & forecasting is necessary and prudent. 30 year horizon is better than 20 year.	Our 4 run-of-river projects would become more viable with a regional approach to transmission.
Tsawout First Nation	We think that wherever possible, BC Hydro should try to increase capacity along existing avenues thereby lessening the impact on environment and lands.	Same answer as previously to this question
Tsawwassen First Nation	Reduced transmission impacts seem beneficial, but it is difficult to provide significant input given the limited information.	Question of who pays is important. If new load is brought on-stream to provide electricity for large mines/industrial projects, that industrial ratepayer (not individual consumers) should pay.
Ucluelet First Nation	Proactive planning is the best way to meet long term efficient transmission planning & construction as well as enabling for more strategic IPP development.	Renewable Energy Production projects (Wind & Wave & Run-of-river) are currently being planned for the Ucluelet Territory. SPECIFICALLY with a 30M.W wind farm planned for Mercantile Creek watershed and Effington (run-of-river) Inlet (transmission could be thru to Canoe Creek Hwy 4) and wave energy from Ucluelet proper.

5.2.1.5 Export Market Potential

The input received on Export Market Potential is set out in Table 5.2.1.5.

Table 5.2.1.5 Input on Transmission Planning

First Nation	Considering the information provided what do you think about building generation for the purpose of exporting electricity to other jurisdictions?	What are your First Nation's interests that BC Hydro should consider in clean generation for the purpose of export?
Bonaparte Indian Band	The existing Hydro dams in place were built in grand size to adequately supply electricity to markets outside of BC and yet the BC residents - First Nations and otherwise - have had to make adjustments for outside markets renegeing on their electrical bill.	The promise of benefits and additional revenue flowing to the First Nations for the next 30 years will need to also address the past 60 years of lack of consultation and compensation to our Firs Nation community. As we presently receive only a mediocre financial supplement for the transmission hub travelling thru 80% of our community. More discussions will need to take place before plans for the next 30 years can be considered.
Kwakiutl District Council	Export of clean firm power, will reduce availability for providing renewable electrical generation	"Land use impact for out of province benefit; premium price paid for this electricity should also reward affected First Nation, not just BC Hydro Customers determine energy 'cleanliness'"
Little Shuswap Lake Indian Band	This is already happening, is already being pushed further, is part of the underlying agenda, and we strongly oppose any further moves in this direction.	All of the above comments for the previous questions apply here as well. Additionally, we do not see the sense in encouraging our neighbours to the south to continue in their mad race to overconsumption, over development, over population, and Californication of the Pacific Northwest.
Samahquam	It is important that we do this - as other jurisdiction grow in their own generation our own demands in future will have been taken care of as surplus begging? to become obvious.	
Toquaht Nation	Excellent as it may discourage or replace other forms of generation	are export rates higher and therefore more likely to support our run-of-river proposals?
Tsawout First Nation	WE don't agree with this avenue.	Same answer as previously to this question.
Tsawwassen First Nation	Difficult to support unless the revenue generated from the export either reduces rates for consumers or provides some benefit to First Nations.	Should electricity be marketed and exported outside the community, First Nation's should benefit through some form of revenue sharing given that much of the electricity will be passing through transmission lines that cross Treaty lands, Reserve lands, or traditional territories.
Ucluelet First Nation	Yes of course!	

5.2.1.6 Clean or Renewable Energy Development in First Nation Communities

The input received on clean or renewable energy development in First Nation communities is set out in Table 5.2.1.6.

Table 5.2.1.6 Input on Clean or Renewable Energy Development in First Nation Communities

First Nation	What are your interests in clean or renewable energy development for your community?
Kwakiutl District Council	"Local electricity generation-cost savings and possible revenues (a bigger incentive than using less electricity). Alternative to diesel generation in remote communities. Large scale developments fit with the affected First Nation's land use vision; reach an Impact benefit Agreement with affected First Nation(s); provide employment, training and contracting opportunities; government shares its revenues with affected First Nation(s); and First Nations have an opportunity to invest in project(s). What are the transmission limitations? Is it for export or within Province?"
Little Shuswap Indian Band	We have, and will continue to explore alternative and local solutions for the energy requirements of our communities.
Penelakut Tribe	In my opinion, BC Hydro needs to go to First Nations communities to meet with Chief and Council rather than meeting with one or two from a community to tell them about these plans. One person cannot form an opinion for an entire community. One meeting should not be considered a consultation regarding plans but should be considered a stepping stone to consultation- is an information session only. In order to get input I believe that BC Hydro should plan on meeting with Chief and Council in the very near future. I applaud the efforts that were made in holding this info session and Penelakut looks forward to further discussion.
Samahquam	1. I truly believe that our community has potential in "Low level" run of the river project: and bigger turbine projects 'seasonal' but sustainable. 2. smart-grid at early stage; currently 20 + buildings in our communities. 3. investigate 'geothermal' in our area; probably for local use! But provide two forms of energy 'if hot enough'. 1, heating the buildings, 2, generating electricity.
Toquaht Nation	Our community is very small. Only 2 years ago we came on the grid and were able to shut down our diesel fired generator. We are concerned with energy efficiency in our future construction.
Tsawout First Nation	We support clean energy development. We recommend BC Hydro look deeper in the development of Wind Generation and Solar Project development
Tsawwassen First Nation	Depending on the outcome of the Metro Vancouver regional integrated waste management plan, Tsawwassen is interested in pursuing waste-to-energy technology. Depending on the approach decided on by both the region, and the province, there is a significant opportunity for Tsawwassen and BC Hydro to bring new, clean energy on-stream. Additionally, Tsawwassen is planning for significant growth over the next 5 to 10 years, and has identified residential, commercial, and industrial development opportunities. Over the next decade there will be as many as 1,700-1,900 new housing units, 150acres plus of commercial development, and up to 300 acres of industrial development. This will add significant new energy demand. The community is well-positioned to incorporate sustainable energy design into how the community develops its lands. Initiatives such as district heating could help Tsawwassen reduce its energy demand from a Business As Usual (BAU) baseline developed with consideration of Tsawwassen's growth plans. One challenge for Tsawwassen however, is that much of BC Hydro's policy support or other funding initiatives target communities of a minimum size, not those that are planning for significant growth. There is a significant opportunity to achieve incremental energy savings over the BAU case of the planned growth, if BC Hydro can tailor programs to support communities such as Tsawwassen who are planning for growth.
Ucluelet First Nation	Better pricing for Wind Power

5.2.1.7 Additional Comments on the Development of the Integrated Resource Plan

The First Nations Input Form offered an opportunity to provide additional comments on the development of the Integrated Resource Plan. The input received is provided in Table 5.2.1.7

Table 5.2.1.7 Additional Input on the Development of the Integrated Resource Plan

First Nation	Comments
Kwakiutl District Council	<p>"More specific engagement locally with First Nations-for example discussion with First Nations located on Northern Vancouver Island about region's potential generation and how would that be transmitted/moved.</p> <p>Specifically involve First Nations at the beginning of planning for regional transmission upgrades and additional transmission capacity to be built; the earlier the better."</p>
Little Shuswap Lake Indian Band	<p>This process, similar in many ways to the WAM process appears to have an underlying and predetermined agenda. It sure feels like window dressing, optics, smoke and mirrors, to keep the public happy. While we understand and appreciate the difficulties of this immensely complicated undertaking, we find that an examination of the fundamental underlying assumptions, which should be part of the discussion, are lacking. These are then characterised as not within the mandate or the Terms of Reference. This is disingenuous at best.</p>
Samahquam	<ol style="list-style-type: none"> 1. start w/ negotiating a 'revenue sharing agreement'(s) w/ FN. BCH to get mandate to negotiate. 2. present a better and current understanding of the GHG CO2 issue with time frame & global goals set: 300 million tonnes of CO2 recovered by 2050, for example. 3. seek out potential proponents of FNs for 'parking lots' venues! 4. provide awareness up to date smart-grid options/opportunity!
Tsawout First Nation	<p>This is not to be construed in any way as consultation with the Tsawout First Nation on this matter.</p>
Tsawwassen First Nation	<p>As was discussed at the meeting, it is Tsawwassen's view, that participation in this workshop and the provision of input does not represent a formal Consultation, and that any decision(s) made by BC Hydro subject to the Integrated Resource Plan (IRP), which impact Tsawwassen's Treaty rights, must be subject to a separate Consultation, as is required under the Tsawwassen Final Agreement.</p> <p>In addition to this submission, Tsawwassen's in-house legal counsel (Tina Dion) will submit a more detailed and formal letter to that effect."</p>

5.2.2 BC First Nations Energy and Mining Council Input

The BCFNEMC provided BC Hydro with their input on the development of the Integrated Resource Plan and the related consultation. The input from the BCFNEMC has been provided in two separate documents, one relating to their involvement in the First Nations regional workshops (**Appendix 16**), and the other relating to their involvement in the Technical Advisory Committee (**Appendix 17**).

In the following sections, the key comments and recommendations provided by the BCFNEMC are set out verbatim as they appear in the two attached documents.

5.2.2.1 BCFNEMC Regional Workshop Comments and Recommendations

The input from the regional workshops addresses all of the six topics BC Hydro addressed at the First Nations regional workshops as well as the issue of consultation process.

5.2.2.1.1 *Conservation and Efficiency*

- Remote Community Electrification: BC Hydro's Remote Community Electrification Program or similar programs to extend reliable BC Hydro service into all First Nations communities must be a first priority. It is simply not possible for First Nations individuals and governments to seriously consider efficiency and conservation measures until they are receiving levels of service comparable to other communities.
- Program Design and First Nations Access: First Nations must be included in Demand Side Management related program design discussions to ensure that they are relevant to local conditions, and members can actually access them and take advantage of possible savings. In addition, easy access for First Nations to residential and commercial energy consumption data is necessary for effective planning. Housing conditions, overcrowding, unemployment and low incomes work against effective First Nations participation, and these must be taken into account to garner First Nations support and achieve expected results.

- **Housing:** Shortages and generally substandard housing conditions in many First Nations communities need to be considered by BC Hydro and government at all levels. FNEMC recommends consideration of a multilateral housing advisory body, with First Nations, Government, and BC Hydro participation. This body should assess and develop new building standards, renovation and incentive programs. This work could be in conjunction with the Assembly of First Nations new green building policy project.
- **Coordination with other government goals and objectives:** Government has a wide range of objectives, policies, and legislation outside the scope of, but nevertheless substantially affecting possible objectives and targets of BC Hydro's IRP. Economic development policies, population and immigration policies, building and transportation policies may all contribute to or be in conflict with IRP goals. Several workshop participants expressed concern that ordinary people might be expected to conserve only to serve the interests of more growth and lower costs in other sectors. FNEMC shares that concern. As with Housing above, FNEMC

5.2.2.1.2 Electrification

- **Service to First Nation communities:** As noted above, numerous First Nations in the province do not have or have inadequate, fossil-fuel based electrical generation systems in their communities. FNEMC recommends that extension of full and reliable electrical service to all First Nations communities in the province be the first priority, be properly resourced and a requirement of electrification initiatives.
- **Impacts on First Nations:** FNEMC is supportive of electrification to reduce GHG emissions and encourage innovation – but we are concerned that increased demand will mean higher rates for First Nations consumers, and will require additional generation and transmission facilities, with consequently higher impacts on First Nations lands and environment. Decisions on electrification made at a provincial level or in one area of the province should not impose pressure for unwanted developments, impacts, or costs on First Nations in another.

- Not an industry incentive program: FNEMC is also concerned that electrification should not become an industry incentive program, simply reducing costs and encouraging greater expansion for beneficiaries, at the expense of existing electrical consumers. New electrical system customers should pay full costs, including any marginal cost increases accruing to existing consumers.

5.2.2.1.3 Transmission Planning

- A proactive approach is necessary: FNEMC is very supportive and encourages BC Hydro to take a more proactive approach to transmission planning. We recognize that some degree of reactivity is unavoidable, but from the perspective of rational land-use, environmental protection, and long-term economic efficiency, it should be minimized to the extent possible.
- Risk of stranded investment: FNEMC believes that these risks can be managed and reduced to acceptable levels. It is possible to plan pro-actively, without fully committing to or actually constructing ahead of established triggers or thresholds. Potential environmental and economic benefits should considerably outweigh the cost of occasional error or miscalculation.
- Distribution of benefits and impacts are not the same: Requirements for new or expanded transmission correspond directly, although not always in proportion, with generation requirements. But we note that the geographic nature or effects of transmission are very different – generation projects usually are situated in and impact a fairly contained area, transmission lines often extending long distances and traversing large areas of unrelated and distant territory. Transmission disproportionately affects First Nations and rural lands, while serving the needs or interests of large demand centres elsewhere (typically urban centres). First Nations must be involved at all levels of planning for transmission projects involving First Nations lands and impacting on First Nations communities or citizens.
- Local First Nations involvement is essential: Smaller scale and distributed generation facilities may require proportionately less transmission than do large scale facilities; remote facilities may require more new transmission than would centrally located plants of similar scale; and transmission needs

may be reduced through planning and coordination to greater or lesser degrees in conjunction with or in advance of expected new generation. As above, generation decisions to satisfy needs of one area (Vancouver or the Lower Mainland for example) or one industry (oil and gas in Northeast BC for example) should not drive transmission decisions and impose disproportionate and avoidable adverse impacts on First Nations or other rural interests. Local consultation and involvement are necessary before project decisions are made.

5.2.2.1.4 *Export Market Potential*

As a matter of broad public policy, FNEMC submits that seeking First Nations support to meet recognized provincial needs is fundamentally very different than asking for such support to satisfy export interests. We note again the irony of pursuing additional exports while First Nations and some other communities within the province remain underserved.

FNEMC recommends the following to be applied to any further consideration and development of export markets:

- **Priority to domestic requirements:** Exports beyond system reliability requirements should be subordinate to conservation and efficiency objectives and to long-term provincial supply requirements.
- **Financial protection of First Nations and other domestic consumers:** Ratepayers must be protected from financial risk and rate increases associated with export market expansion.
- **Protection against adverse impacts:** First Nations must be protected from unwanted development impacts associated with generation and transmission projects required to serve export interests.
- **First Nations participation essential:** First Nations must be full participants in and beneficiaries of export oriented development. First Nations should be given clear priority rights to propose, develop, and operate any projects on or crossing First Nations lands.

- Coordination of IRP and government objectives: Government is clearly interested in pursuing economic development opportunities in all sectors and areas of the province. While that interest is legitimate and understood, it again raises the potential of conflict between recommended or agreed IRP directions and more general government economic ambitions. FNEMC submits that ongoing dialogue among government, BC Hydro, First Nations and stakeholders will be required to avoid future conflicts.

5.2.2.1.5 Clean or Renewable Energy Development in First Nation Communities

FNEMC strongly supports a greater emphasis on clean or renewable energy and on locally owned First Nations projects. Meaningful involvement of First Nations in renewable energy project could significantly assist in meeting BC Hydro's objectives and requirements of the IRP, and could foster substantially greater First Nations interest, participation, and support for the IRP and subsequent BC Hydro processes.

- BC Hydro policy review: Working with First Nations, BC Hydro should review procurement, energy purchase, and related policies to facilitate First Nations developments and reduce financial or other barriers that currently discourage First Nations participation.
- Local focus and support essential: Projects must be suitable to local conditions and be supported by the community. Early successes are essential. BC Hydro should establish services to provide technical, business, and other resource support to assist interested First Nations in planning, assessing, and developing local facilities on a pilot or demonstration project basis.

5.2.2.1.6 General and Process Related Issues

- Capacity funding for effective First Nations participation is necessary, particularly to assist with technical issues and analysis: As it includes both generation and transmission, the IRP is arguably a more comprehensive exercise than the BCUC Transmission Inquiry initiated in 2009. At the same time, the opportunities for input and assistance provided to First Nations have been significantly reduced. Fewer regional workshops are planned, those

recently completed were considerably later in the overall process, there will be no public hearings and opportunity for examination of BC Hydro plans, and resource support to First Nations and First Nations organizations has been reduced or, in the case of technical assistance, eliminated.

- BC Hydro must provide additional opportunities for First Nations input, and must if necessary extend timelines for the process to accommodate such input: First Nations in British Columbia are entitled to meaningful consultation – including the receipt of full and timely information, reasonable time and opportunity to respond, and the expectation that First Nations positions will be considered and accommodated. The changes noted above raise serious doubts about BC Hydro's commitment to consultations, and they may bring into doubt the validity of the process and decisions made.
- Either during the IRP process or following it, but before government decisions are made, discussion and consultations are necessary to reconcile related policy directions: The process implies and raises expectations of decisions and policy directions to guide future electrical developments across the province. But the process also leaves out some players and other issues critical to a provincial strategy or plan. It is our understanding that Fortis BC, Columbia Power, and Alcan operations are not formally part of the IRP and thus may not be bound by certain policy directions. More importantly, the IRP understandably cannot incorporate or impose conditions on government policy beyond the mandate of BC Hydro, but it is not at all clear what consultations and inter-agency mechanisms are contemplated to harmonize and minimize inconsistencies or conflict.
- It is critical to First Nations that local issues be fully acknowledged and given appropriate weighting: It is similarly unclear how the IRP process will integrate regional and community interests and priorities with provincial ones. Site C is a particularly obvious example of this issue and potential conflict between local or regional and provincial interests, as well as between First Nations and public or other stakeholder interests.
- If First Nations support or endorsement of the IRP is desired, First Nations must be more fully included in the process: Notwithstanding early representations to the contrary, First Nations engagement in the IRP has

been late and inadequate to-date, and further engagement is not planned until after a draft plan has been produced by BC Hydro. Recent regional workshops were, for most First Nations, their first information and exposure to the process. Most came without, and do not have, technical support or capacity to obtain the same. They were asked to provide feedback at the workshops and within a few weeks following on very complex and consequential issues. Most will not be involved again until a plan has been drafted and they are asked to comment. None were involved or provided with detailed information prior to the first workshops, and none are planned to be involved until the second. At that time, as one participant noted, 90% of all the decisions will have been made.

- Prior to emergence of a draft plan, not after it has been internally produced, is the appropriate time for discussion of these connections: Similarly, the separation and connections between the technical and public and First Nations “consultation” streams is not clear. To this time, the two have been proceeding largely in isolation of each other, but the analysis and recommendations of each will necessarily need to be merged at some point. Designation of some issues as “technical” and others not is also a matter of perspective. First Nations characterization and emphasis given to various social, environmental, cultural, and even economic factors may be quite different than those of BC Hydro planners, technicians, and financial analysts.
- BC Hydro and provincial policy must be changed to encourage participation and to offer revenue-sharing, royalty, or other financial incentives to First Nations: The distribution and effects of “benefits” and “impacts” associated with energy developments are very different. Local areas, usually rural disproportionately bear the adverse effects, while consumers and industry participants, usually urban, reap the majority of benefits. First Nation communities must be full participants in all stages of development from planning through to operations, and they must be full beneficiaries of local developments.
- Affected lands should be mapped and given “protected” status during planning and pending resolution of Claims: First Nations rights and title interests, treaty rights, First Nations traditional territories, and lands subject to

Land Claims negotiations must be recognized and accommodated in all stages of the IRP.

5.2.2.2 BCFNEMC Technical Advisory Committee Comments and Recommendations

The input from the BCFNEMC's involvement in the Technical Advisory Committee does not include comments on Clean or Renewable Energy Development or consultation process as these were not addressed in the Technical Advisory Committee.

5.2.2.2.1 Conservation & Efficiency

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Sustainability:** As stewards of the land, First Nations are committed to the responsible use of lands and waters to ensure their availability for future generations. Improving conservation and efficiency is consistent with sustainability and sustainable development which are core principles of the BC First Nations Energy Action Plan.
- **Pursue Economic Conservation/DSM Opportunities:** Given the benefits of improved conservation and efficiency, (including reduced environmental impacts; improved efficiency and lower energy costs) BC Hydro should pursue all economic conservation/DSM opportunities.
- **BC Hydro and the Province of British Columbia should provide capacity funding for energy managers to support energy conservation in First Nations communities.**
- **Access to Conservation Initiatives:** Access to DSM/Conservation initiatives is a challenge for many First Nation communities – particularly those in rural and remote locations. BC Hydro needs to ensure its DSM programs are accessible to all First Nations communities. Relevant considerations in this regard include:

- In First Nations communities housing costs and electricity bills may be paid by the Band and not the individual or family residing in the home. Therefore conservation programs involving financial incentives/assistance for repairs and upgrades or reduced electricity bills may not be as effective as in other communities.
- Access to capital dollars for repairs and improvements to community facilities (both residential and commercial) may be limited compared to other communities.
- Codes and standards applicable in First Nations communities may differ from provincial standards.
- Funding for First Nation Community Energy Managers: In recognition of the specific challenges associated with conservation/DSM initiatives in First Nations communities, BC Hydro and the Province of British Columbia should provide capacity funding for energy managers to support energy conservation in First Nations communities.
- Communication: Much of BC Hydro's communication related to DSM and conservation in the IRP process focuses on the need to make sacrifices and the consequences if conservation targets are not achieved. BC Hydro should instead focus its communication on conservation initiatives on the benefits to First Nations and British Columbia, including reduced environmental impacts, less waste and lower energy costs.

5.2.2.2.2 Electricity Generation Options

Electricity Generation Options: Portfolio 1

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- Support for Renewable Energy Projects: First Nations strongly support the development of clean, renewable sources of electricity to meet future energy requirements. Many First Nations are currently experiencing the direct negative effects of climate change. Ensuring future electricity needs are supplied by clean and renewable sources will help respond to the impacts of climate change and stabilize greenhouse gas concentrations.

- **Support for Locally Developed and Owned Projects:** In the past, resource developments imposed environmental damages without ensuring benefits for local communities. First Nations support projects that are developed and owned directly by the community or through partnerships. This helps to ensure projects are developed in a manner that is consistent with the broader plans and objectives of local communities in mind.
- **Balancing of Costs and Benefits:** It is recognized that the cost of future development projects must be taken into account in long-term planning. A focus on conservation and sustainability can help to ensure increasing electricity prices do not become a burden on local residents or become a barrier to other types of economic development.

Electricity Generation Options: Portfolio 2

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Conflicts between Provincial Level Planning and Regional/Local Environmental Impacts:** Site C highlights the conflict between provincial level energy planning and regional environmental impacts. In order to develop Site C, local First Nations and communities would be asked to bear significant impacts on lands and water. One of the core principles of the First Nations Energy Action Plan is recognition of the autonomy of individual First Nations in decision-making for their traditional areas. No decisions or plans with respect to Site C can be made without meaningful consultation and accommodation with First Nations whose lands and waters would be impacted.
- **Funding Required for Local and Regional Development Plans:** There is a need for better development and coordination of energy planning with regional and local planning processes. BC Hydro and the provincial government should address funding for local and regional development plans.
- **Early Engagement Necessary:** Site C also highlights the need for early engagement of First Nations and local communities in resource development projects. First Nations must have the opportunity and the necessary resources to understand and evaluate development proposals.

- **Full Impacts of Development must be Understood:** In order to make informed decisions on new developments, a complete understanding of the potential environmental and human effects of the development must be undertaken. This includes an assessment of impacts at the regional level and an assessment of cumulative effects with other activities in the region.
- **Benefits must be Shared:** If new projects, including Site C, can be developed in a manner that is acceptable to the impacted First Nations and communities, mechanisms must be in place to ensure the economic benefits of the project are shared fairly with the local communities. Benefit sharing must extend beyond simply offering short-term construction-related employment to local residents. Revenue sharing and project ownership must be included as benefits for local First Nations and communities. Best practices from other Canadian jurisdictions should be reviewed and incorporated into project planning and development
- **Capital Costs of Site C must be Reviewed:** Capital costs for major hydro-electric facilities can change dramatically in a short period of time. For example, Manitoba Hydro has recently updated its capital cost estimates for the Keeyask and Conawapa generating stations. The most recent 2010 capital cost forecasts are both 50% higher than the 2008 forecasts. Manitoba Hydro notes these cost increases are due to more current market information and delays in the in-service dates for both facilities.

Electricity Generation Options: Portfolio 3

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Concerns Related to Site C:** The BCFNEMC reiterates its concerns with potential effects of Site C noted above.
- **Role of Natural Gas Requires Careful Consideration:** First Nations are currently experiencing negative impacts of climate change and support efforts and policies to stabilize and reduce greenhouse gas emissions. However, natural gas generation may still have a role to play in long-term energy planning. For example, planning to include natural gas based resources, to be used particularly during infrequent low-water years, may provide cost-benefits

and improve reliability and energy security. Natural gas may also have a role in helping to displace electricity that is currently imported from other jurisdictions that primarily use coal for generation. These potential benefits need to be weighed against the greenhouse gas and potential environmental implications. To date, insufficient information has been produced on the trade-offs involved to allow for informed decision making

5.2.2.2.3 *Electrification*

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Electrification of Remote Communities:** Electrification should include extending BC Hydro grid service to remote communities as a priority. In particular those communities currently served by diesel or non-renewable generation.
- **Greenhouse Gas Benefits need to be Weighed Against Other Environmental Impacts:** First Nations are supportive of actions that reduce greenhouse gas emissions. However, increased electricity generation and transmission projects involve their own environmental impacts. The potential greenhouse gas benefits need to be weighed against these environmental impacts.

5.2.2.2.4 *Transmission Planning*

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Transmission Planning must be Coordinated with Local and Regional Development Plans:** A proactive approach to transmission planning may provide benefits to local regions and communities by reducing costs in the long-term, reducing environmental impacts associated with transmission developments and supporting local and regional economic development. However, for this planning approach to be successful it must be conducted in partnership with First Nations and local communities.

- **Isolated Communities should be Priority:** At present, many First Nation and rural communities are isolated from the provincial electricity grid. Isolated communities, in particular those currently served by diesel generation, should be a priority for new transmission access in order to ensure the economic benefits of clean, low-cost electricity are provided to all communities in the province.

5.2.2.2.5 Export Market Potential

Based on the information provided to the Technical Advisory Committee to date, the BCFNEMC provides the following comments:

- **Clean Energy Act Requirements Already Ensure Substantial Energy Available for Export:** As a result of implementing the planning requirements contained in the *Clean Energy Act*, BC Hydro will already have a substantial amount of clean and renewable electricity available for export in most years. Despite this amount of energy being available for export, BC Hydro is projecting substantial rate increase requirements over the next several years. It is difficult to understand how a case could be made that acquiring additional electricity resources to serve the export market could result in economic benefits to British Columbia.
- **Domestic and Export Markets Require Different Policy Context:** In the BCFNEMC's view development of energy resources to support local communities and businesses is a different policy concept than the development of energy resources for sale to customers in other jurisdictions. Local First Nations and communities should not be asked to bear increased environmental impacts to serve customers in other jurisdictions without ensuring the local communities and regions benefit substantially from these developments. The concept that the economic benefits would flow primarily to the provincial government is not acceptable.

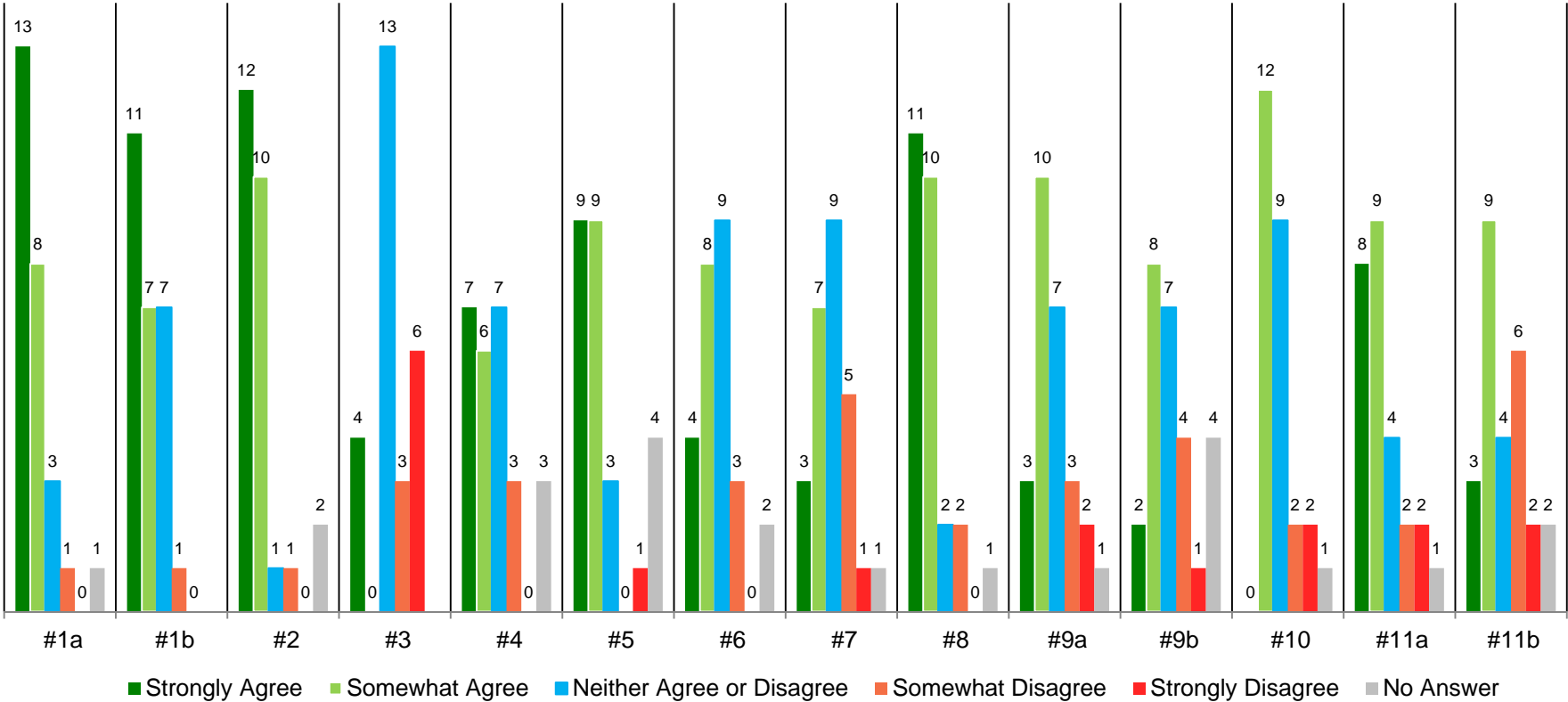
5.2.3 Additional Comments & Input

Ten letters and emails were received by BC Hydro that contain additional comments and input about the workshops and/or the development of the Integrated Resource Plan and the related consultation process (**Appendix 18**).

Appendix 20 — Graphic Representation of Responses in First Nations Feedback Forms



Overview of First Nations Level of Agreement with Recommended Actions*

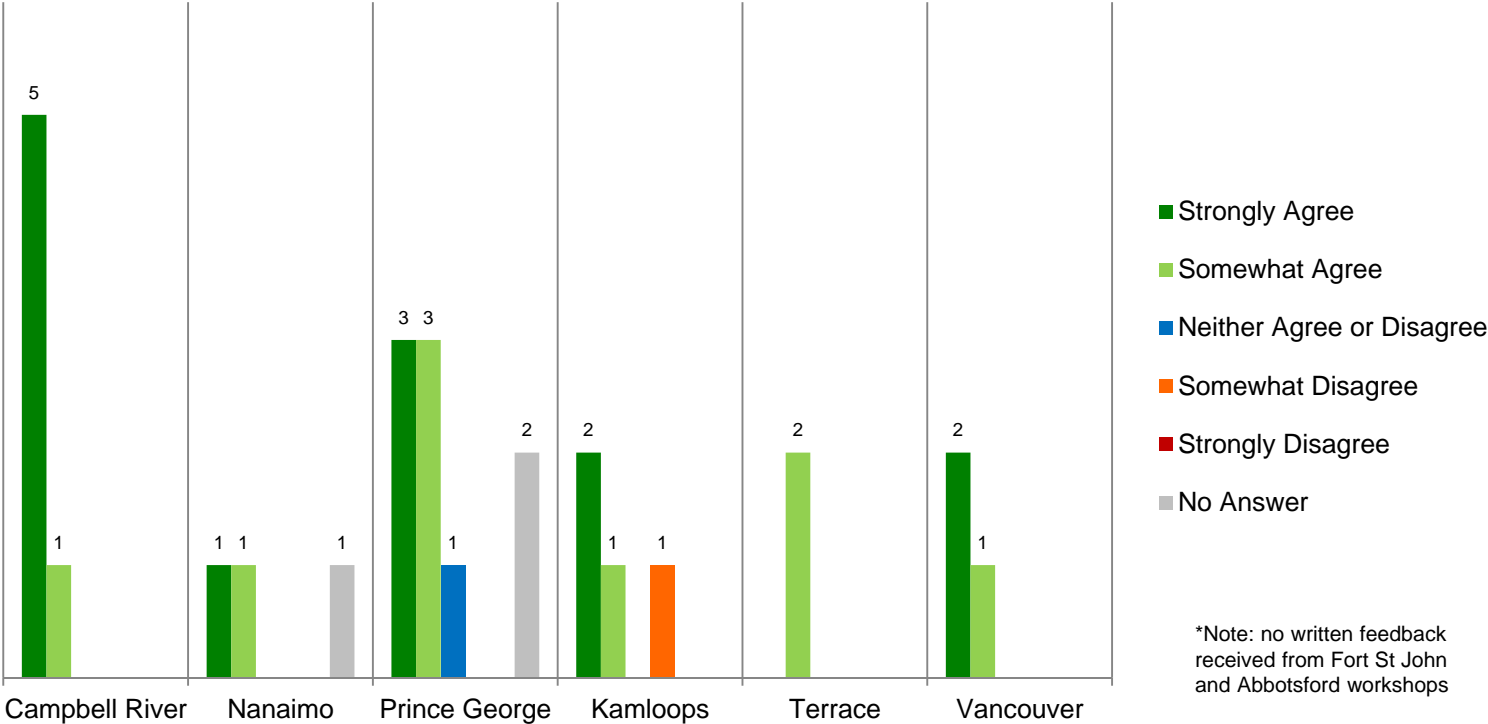


*Written Feedback Participation
 21 of 68 participating First Nations
 26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #1a

Increase our energy savings target to 9,800 gigawatt hours per year by 2020 (1,000 gigawatt hours more than the current plan) through conservation and efficiency programs, incentives and regulations.

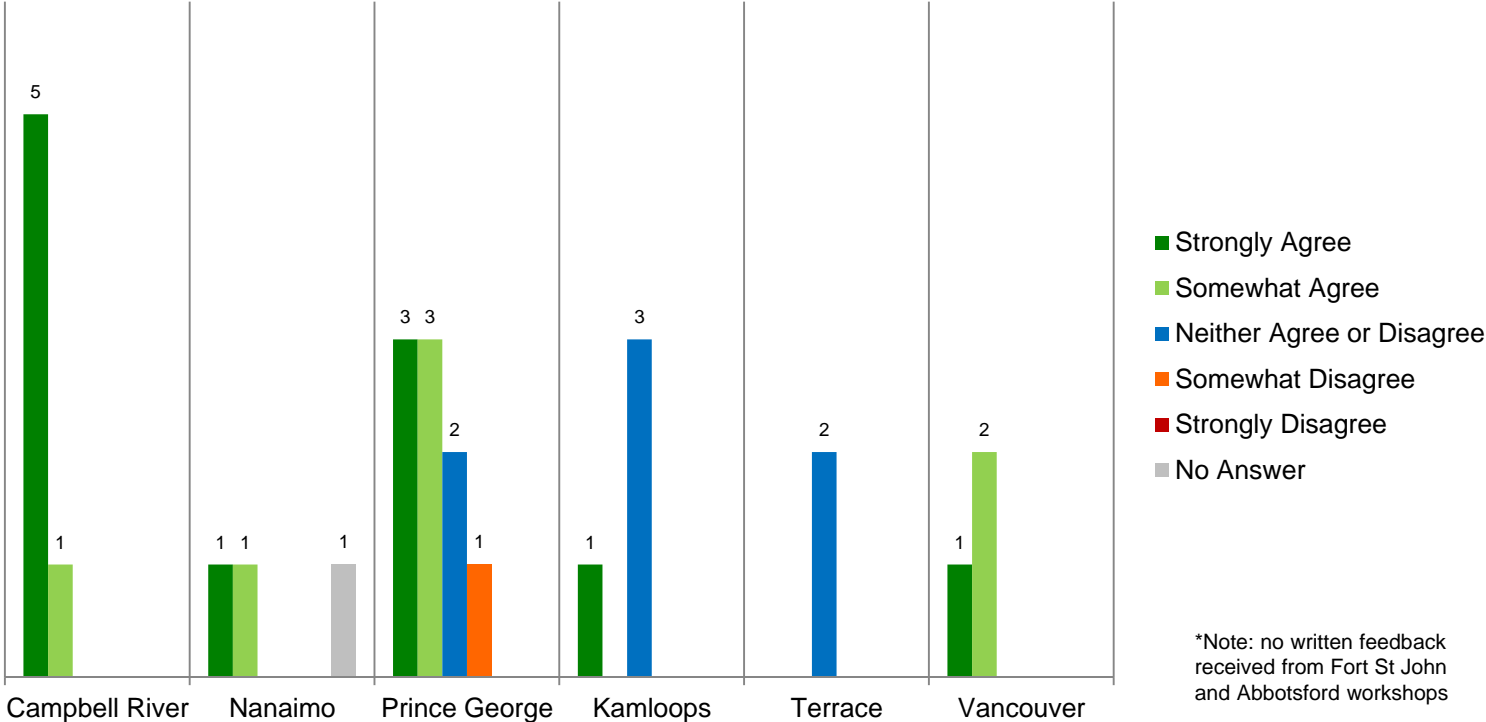


*Written Feedback Participation
21 of 68 participating First Nations
26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #1b

Explore more codes, standards and rate options for savings beyond the annual target of 9,800 gigawatt hours

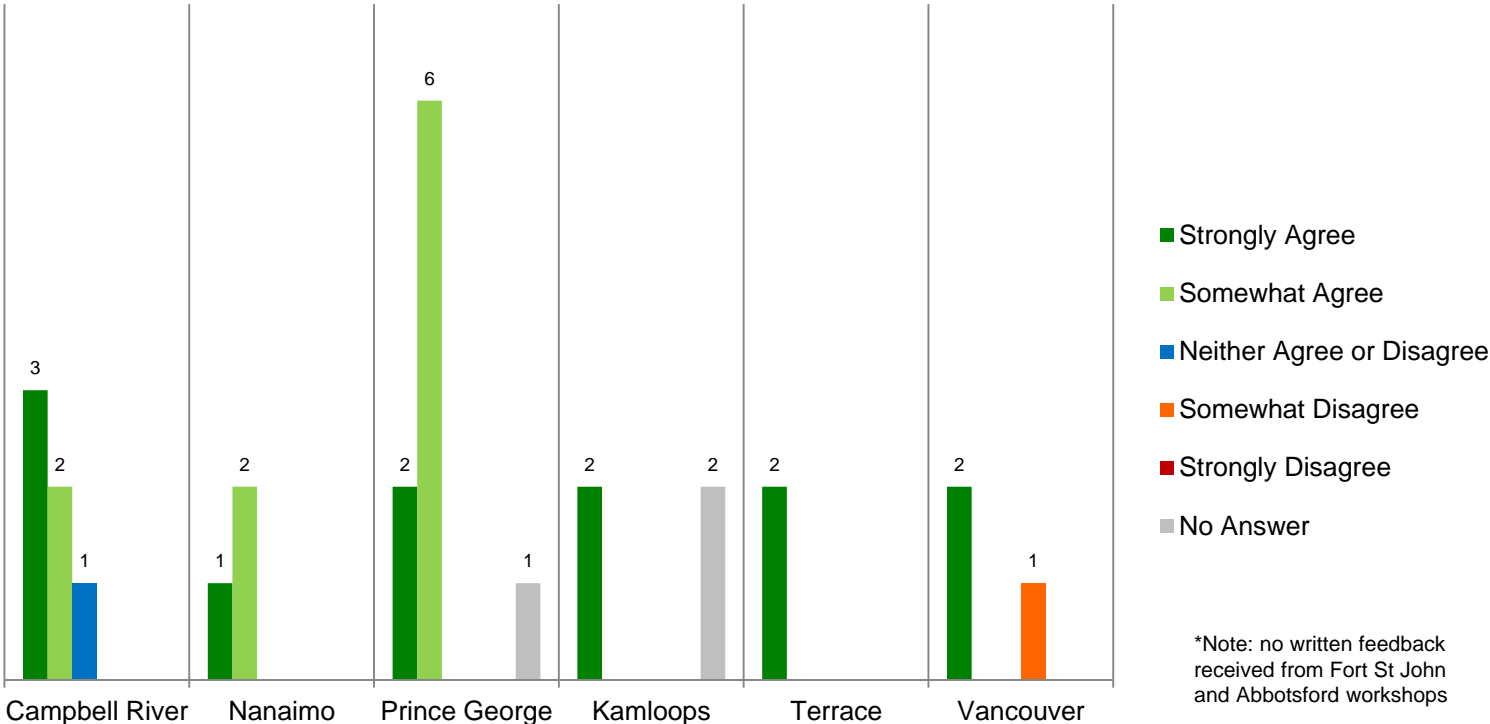


*Written Feedback Participation
21 of 68 participating First Nations
26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #2

Pursue voluntary conservation programs that encourage residential, commercial and industrial customers to reduce energy consumption during peak periods.

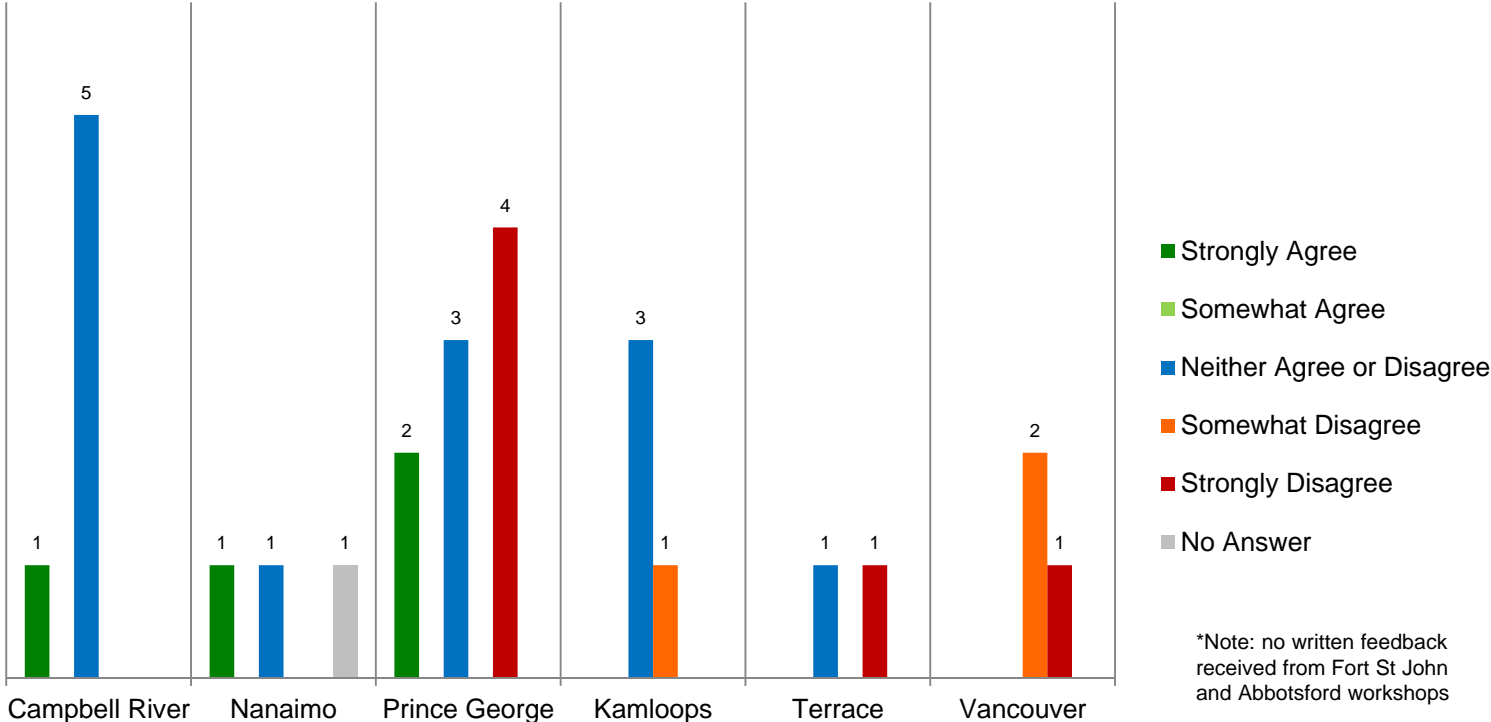


*Written Feedback Participation
21 of 68 participating First Nations
26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #3

Build Site C to add 5,100 gigawatt hours of annual energy and 1,100 megawatts of dependable capacity to the system for the earliest in-service date, subject to environmental certification and fulfilling the Crown’s duty to consult and, where appropriate, accommodate Aboriginal Groups.

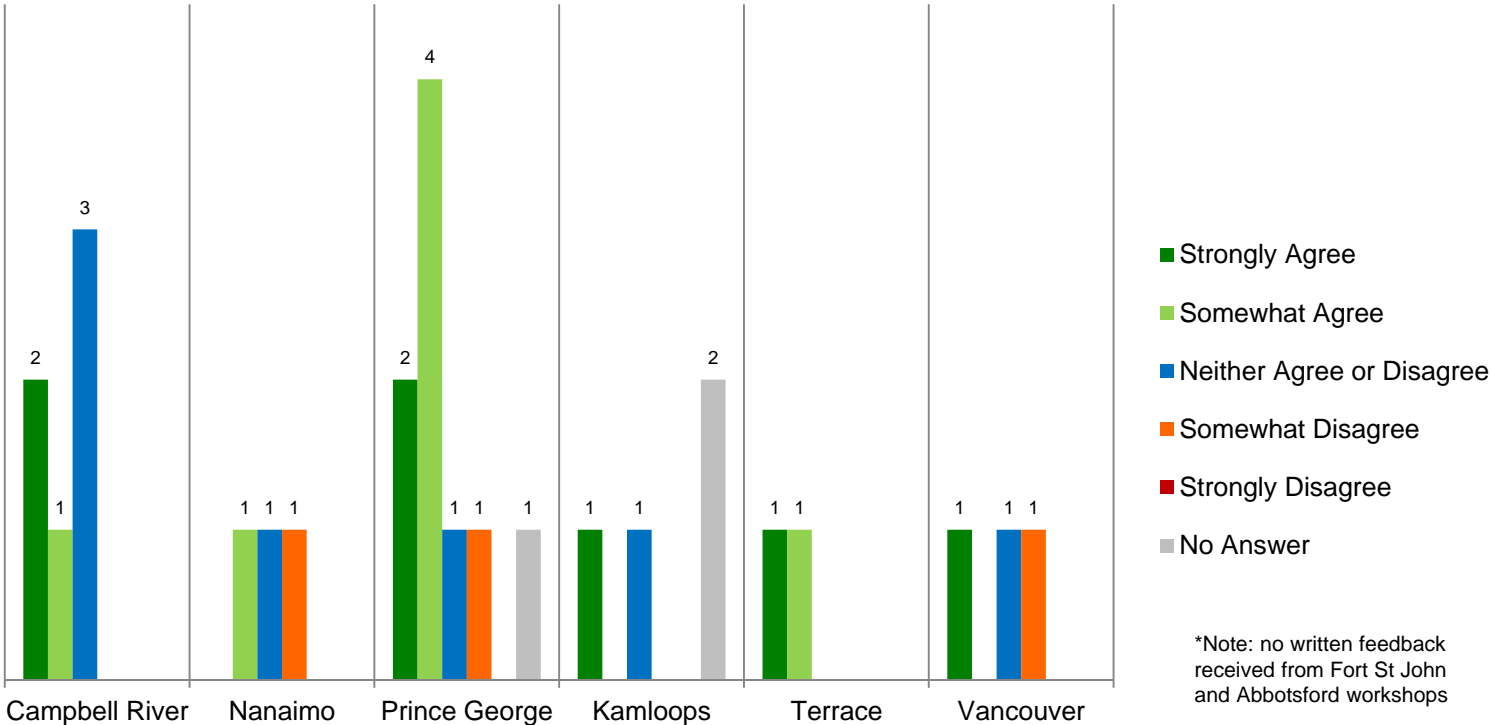


*Written Feedback Participation
21 of 68 participating First Nations
26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #4

Begin work to allow the sixth generating unit at Revelstoke Generating Station to be built by 2018, adding 500 megawatts of peak capacity to the BC Hydro system.



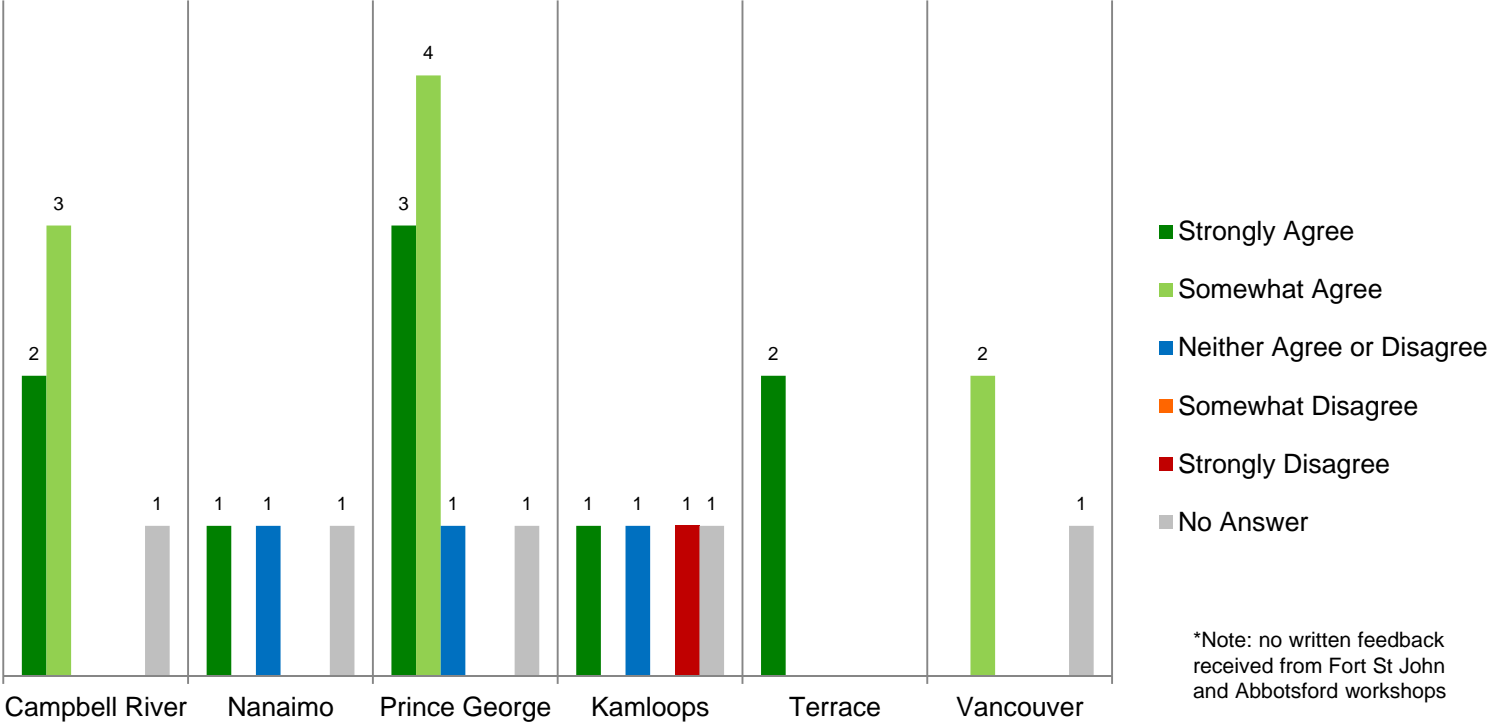
*Note: no written feedback received from Fort St John and Abbotsford workshops

*Written Feedback Participation
21 of 68 participating First Nations
26 of 121 workshop attendees



First Nation Participants Level of Agreement with Recommended Action #5

Continue to investigate and advance cost-effective Resource Smart projects to utilize the remaining untapped capacity within BC Hydro's existing hydroelectric system.

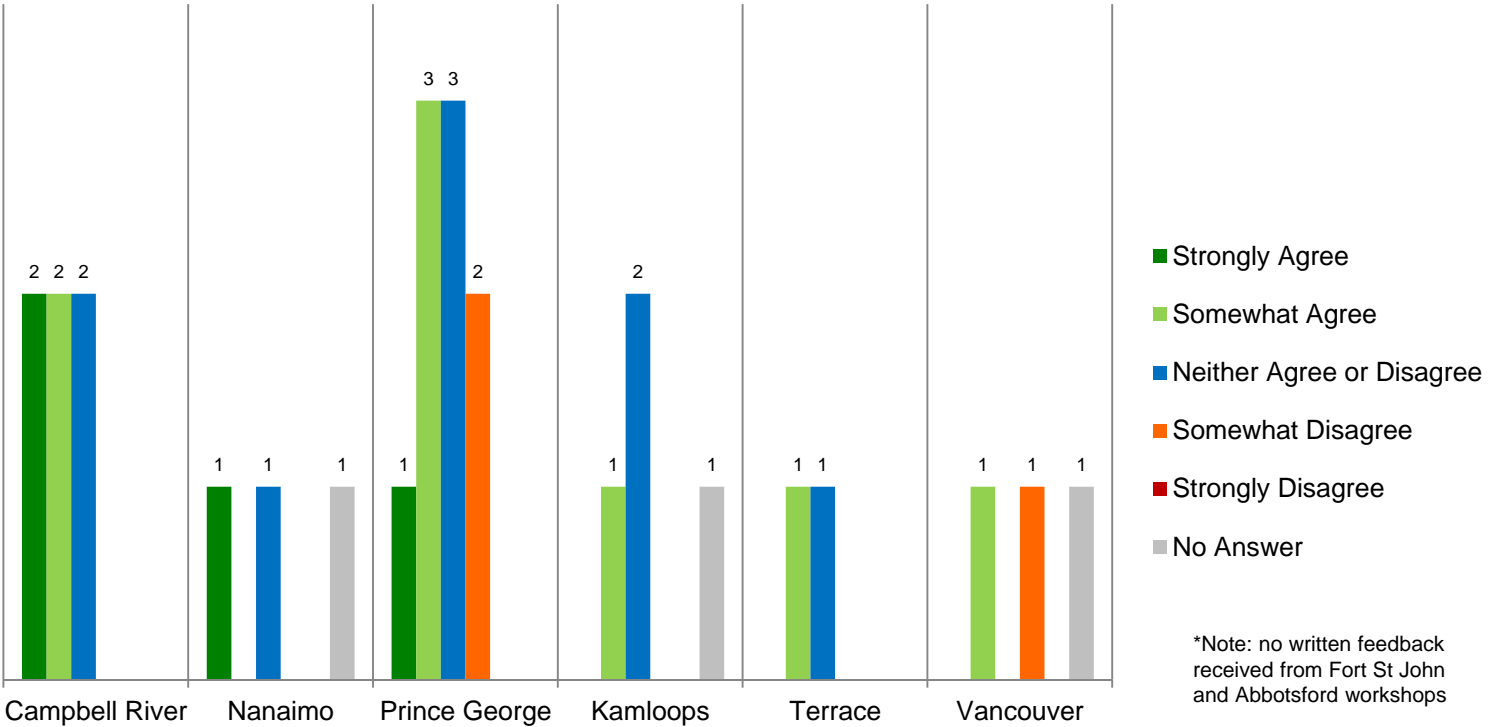


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First Nation Participants Level of Agreement with Recommended Action #6

Fill the short term peak capacity gap from 2015 to 2020 with a combination of market purchases first, power from the Columbia River Treaty second, and extending the existing backup use of Burrard Thermal Generating Station, if required and as authorized by regulation.

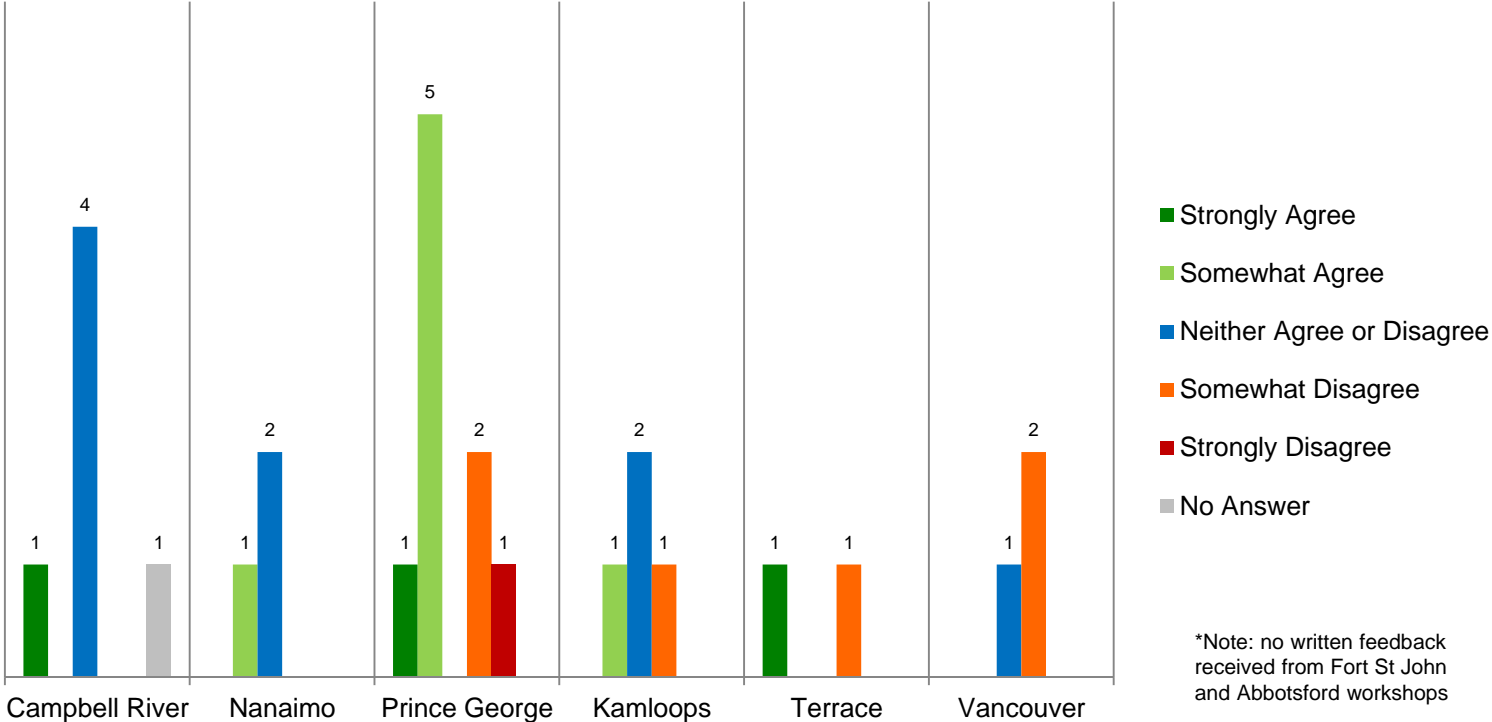


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First Nation Participants Level of Agreement with Recommended Action #7

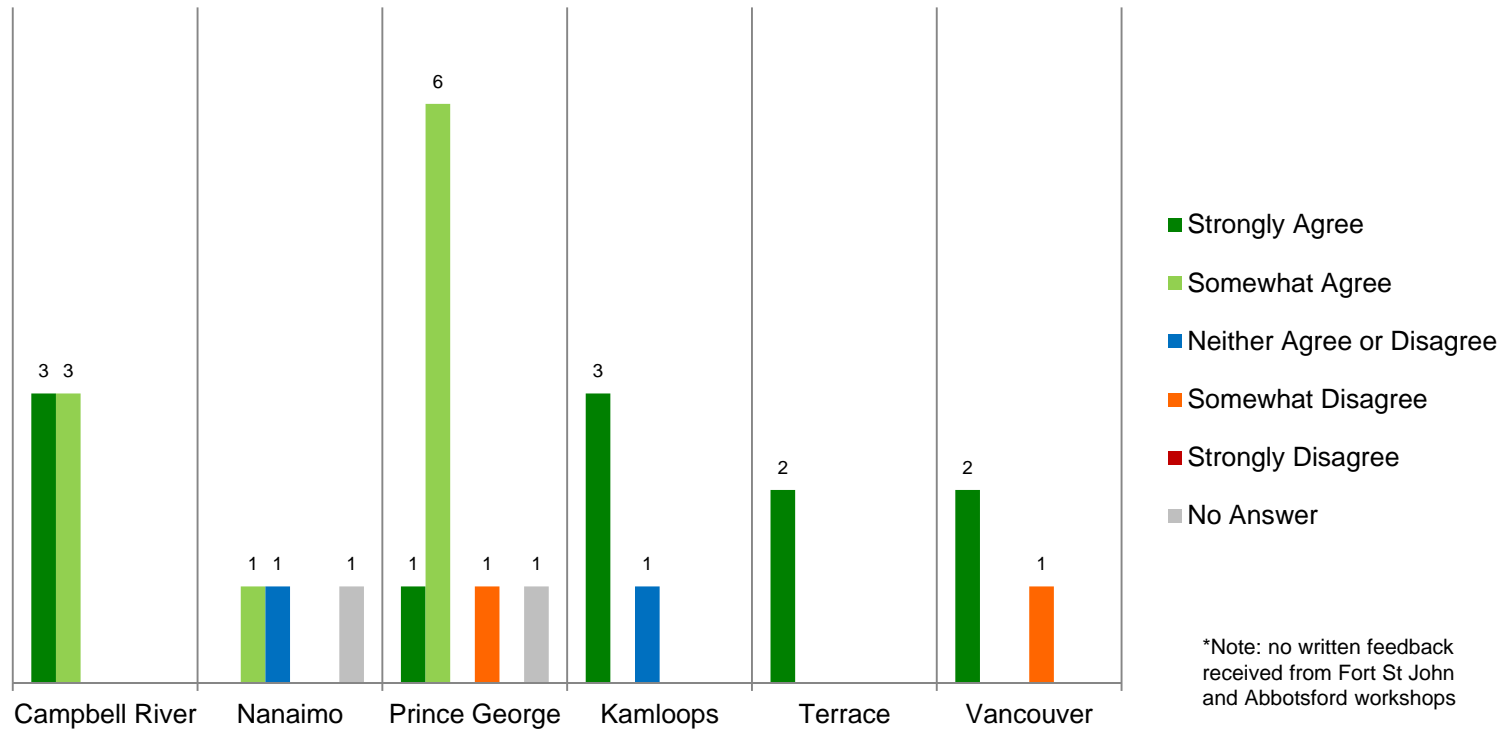
Reinforce the existing 500-kilovolt line from Prince George to Terrace to meet new demand on the north coast.



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First Nation Participants Level of Agreement with Recommended Action #8

Develop energy procurement options to acquire up to 2,000 gigawatt hours per year from clean energy producers for projects that would come into service in the 2016–2018 time period.

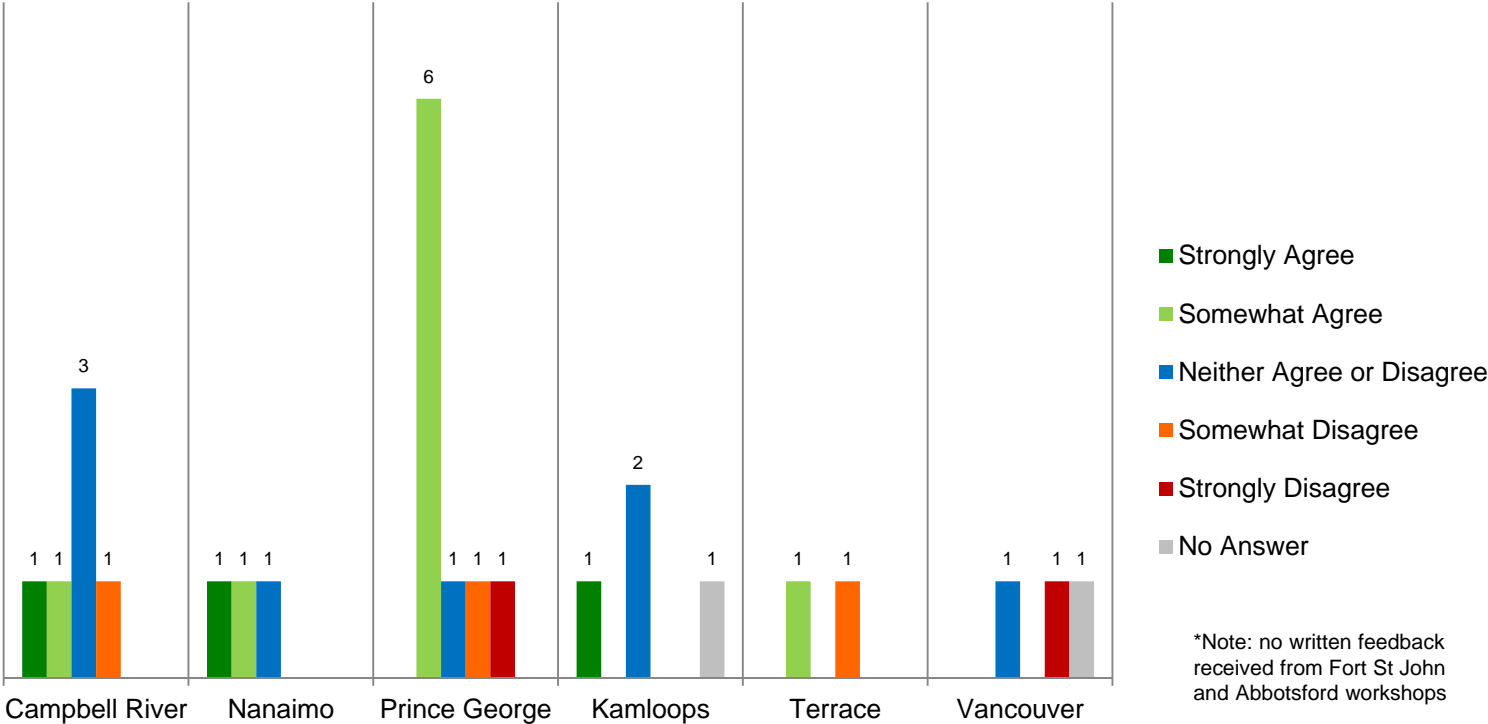


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First Nation Participants Level of Agreement with Recommended Action #9a

Continue to work with Liquefied Natural Gas developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically: Undertake work to maintain the earliest in-service date for a new 500-kv transmission line from Prince George to Terrace and Kitimat and from the Peace River region to Prince George.

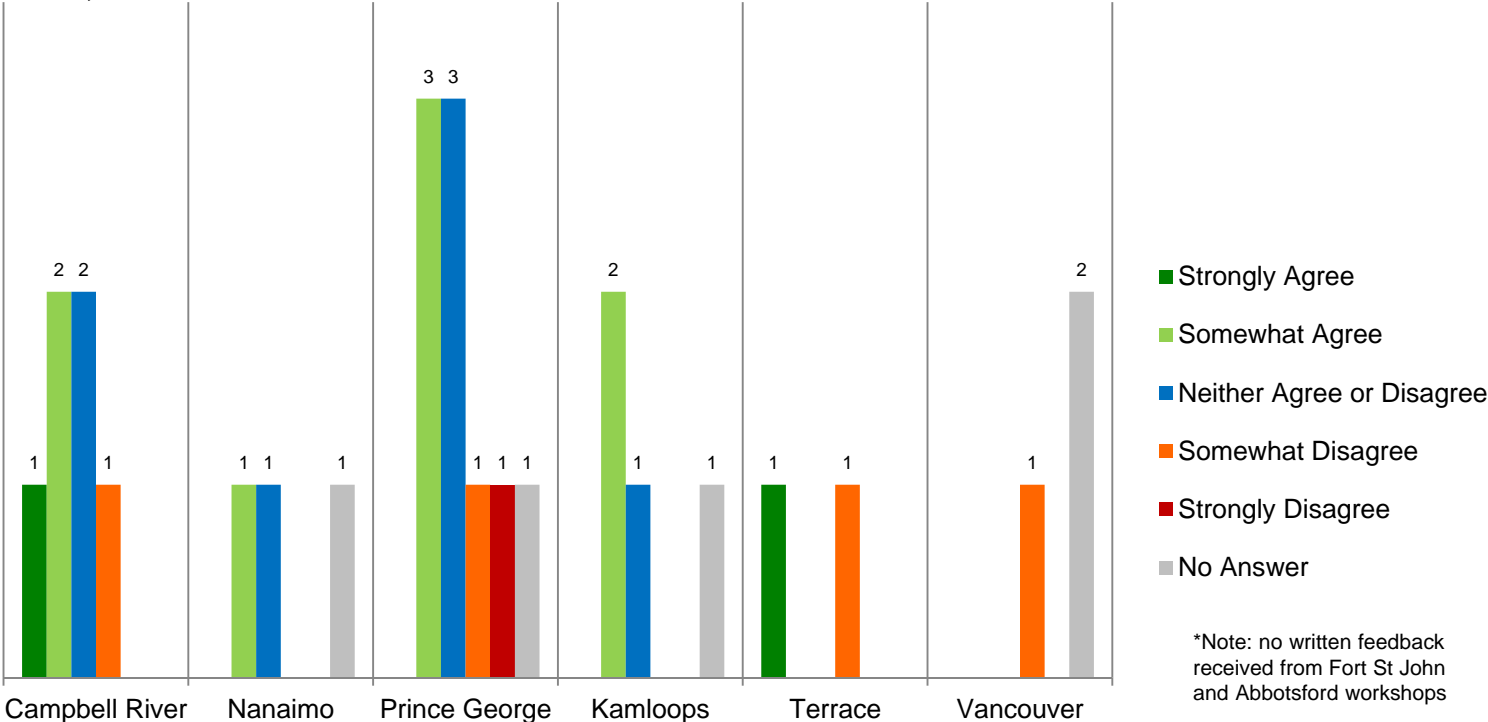


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First Nation Participants Level of Agreement with Recommended Action #9b

Continue to work with Liquefied Natural Gas developers to understand their electricity requirements, and keep options open until further certainty on future requirements can be established. Specifically: Develop procurement options for additional clean energy resources, backed up by gas-fired generation (located only in the north coast, or in both the north coast and across the province) for electricity that could be delivered in the 2019–2020 time frame, should it be needed.

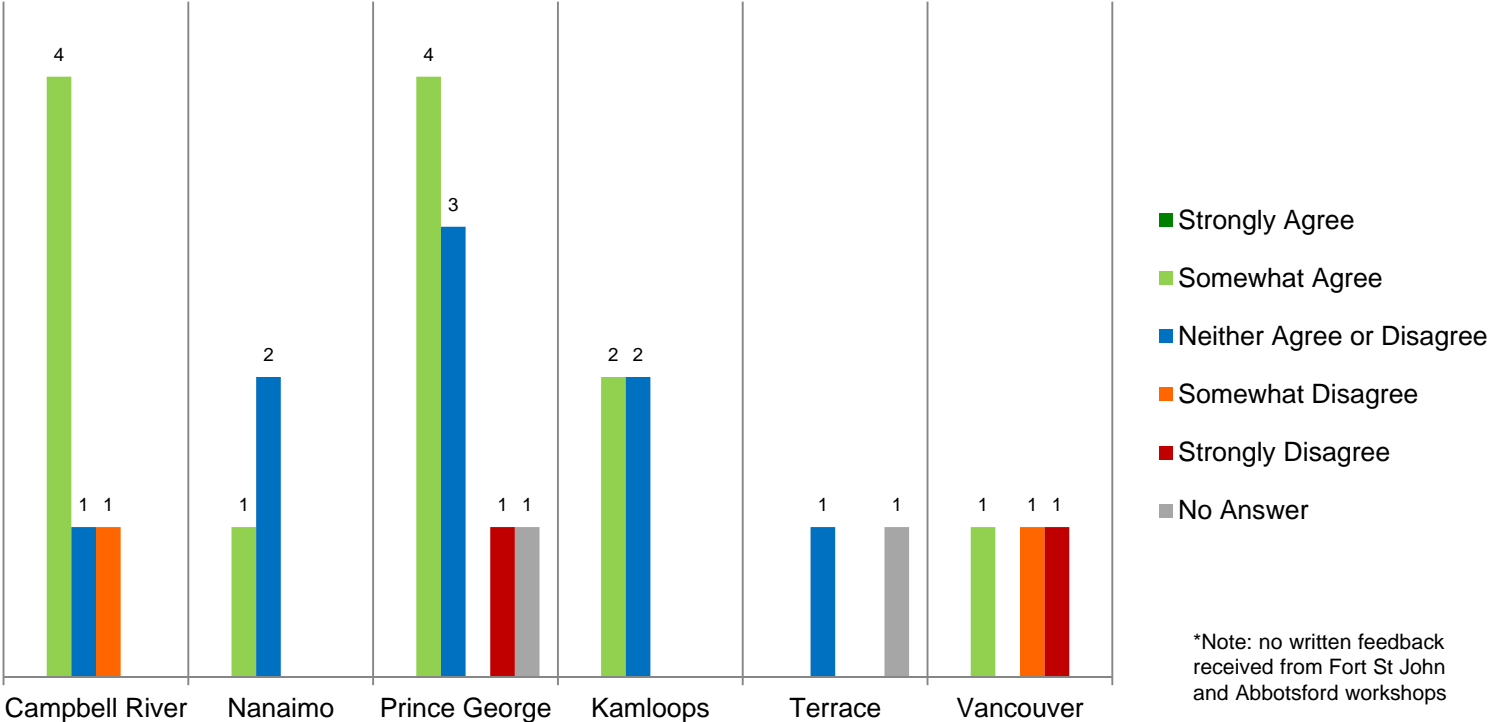


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First Nation Participants Level of Agreement with Recommended Action #10

Continue to monitor the northeast natural gas industry and undertake studies to keep electricity supply options open, including transmission connection to the integrated system, and local gas-fired generation.

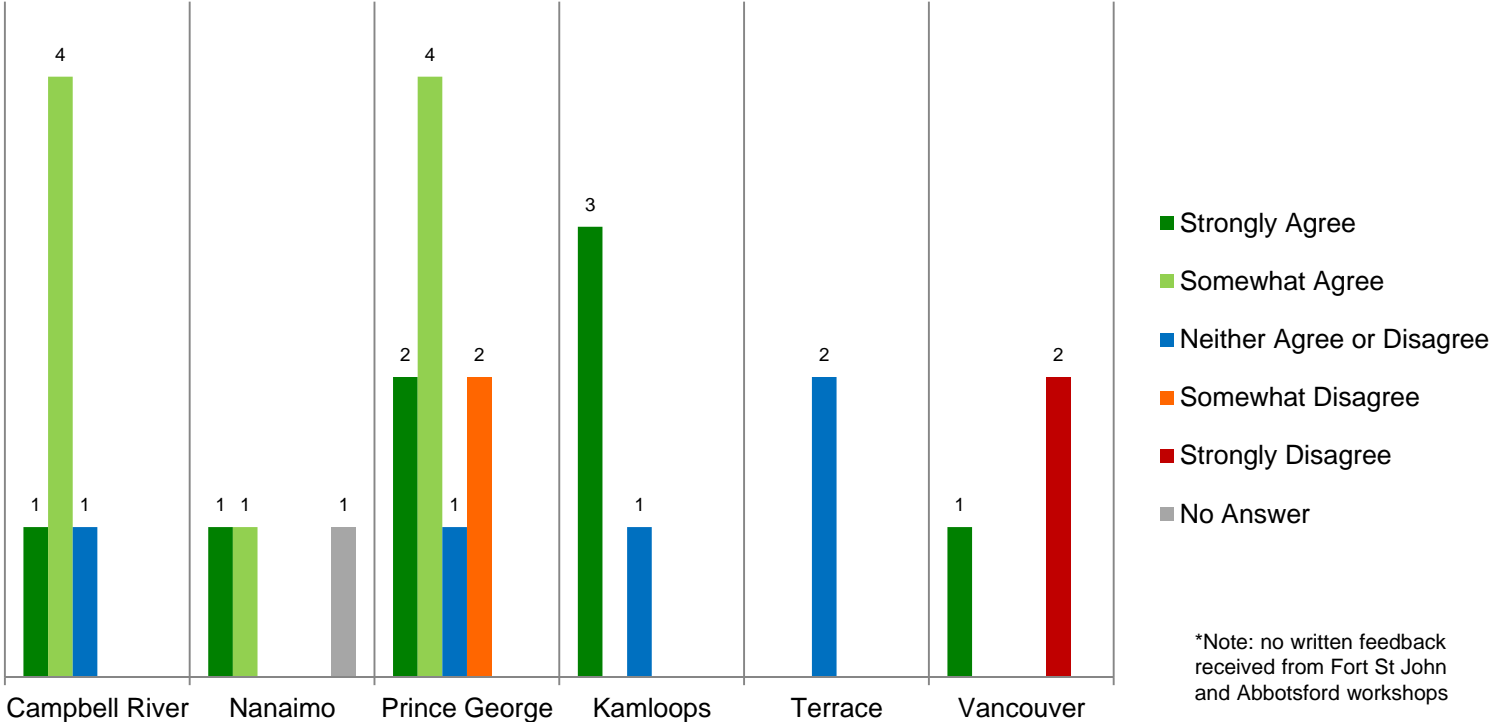


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First Nation Participants Level of Agreement with Recommended Action #11a

Working with industry, explore pumped storage capacity options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.

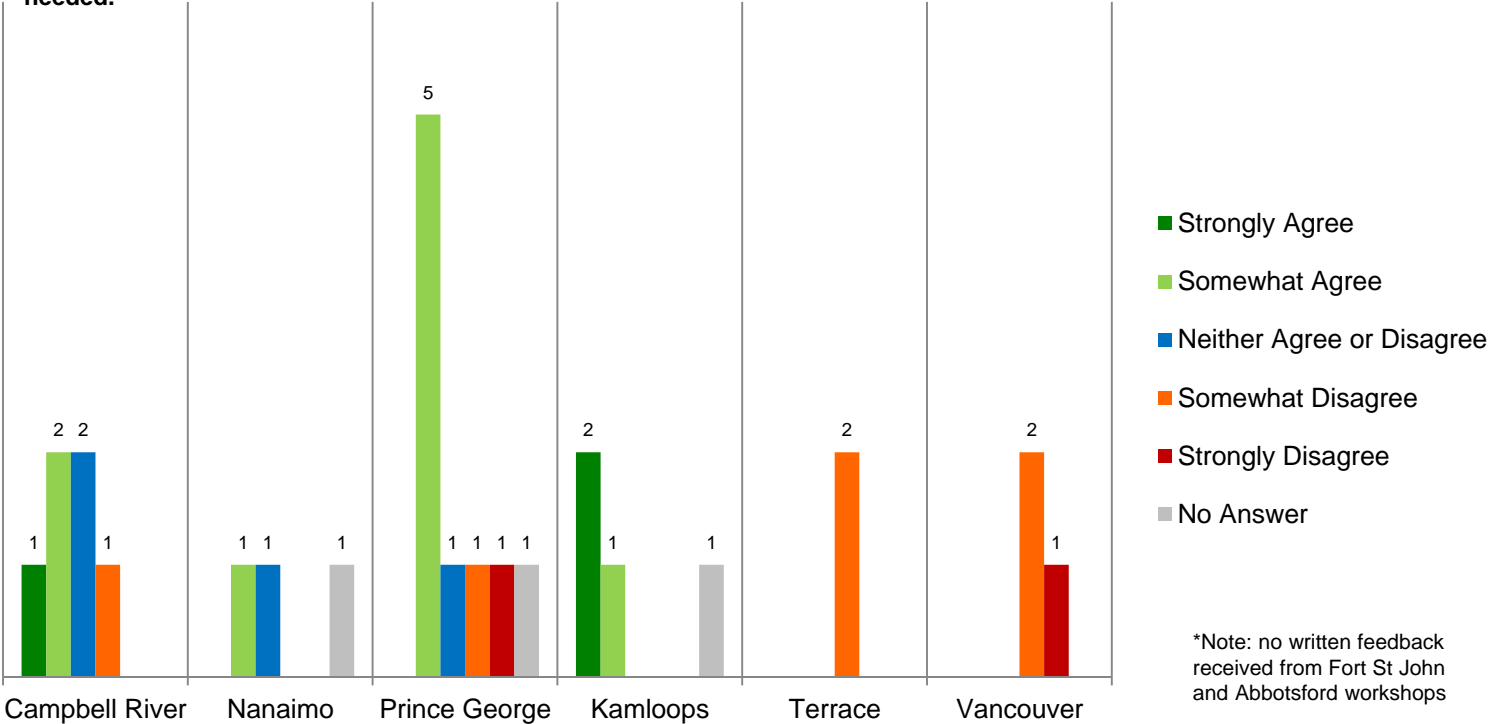


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First Nation Participants Level of Agreement with Recommended Action #11b

Working with industry, explore natural gas-fired generation options to reduce the lead time to in-service dates and to develop an understanding of where and how to site such future resources in the province, should they be needed.



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