Info Session Date and Location
October 27, 2005
Super 8
9500 Alaska Way, Fort St. John, B.C.
7:30 p.m. to 9:30 p.m.

Attendees and Interests

<table>
<thead>
<tr>
<th>Name</th>
<th>Interest/Organization</th>
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<tr>
<td>Arlene Boon</td>
<td>Interested Citizen</td>
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<tr>
<td>Barb Wagner</td>
<td>Peace Valley Environmental Association (PVEA)</td>
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<td>Bill Bouthioux</td>
<td>Interested Citizen</td>
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<td>Brian Churchill</td>
<td>Interested Citizen</td>
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<td>Bruce Lantz</td>
<td>Northeast News</td>
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<td>Carleen Andrews</td>
<td>Interested Citizen</td>
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<td>Chandra Wong</td>
<td>Interested Citizen</td>
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<td>Chris Wagner</td>
<td>Peace Valley Environmental Association (PVEA)</td>
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<td>Christina Gregoire</td>
<td>Interested Citizen</td>
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<td>Dave Read</td>
<td>Peace River Regional District</td>
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<td>Denise Hryciuk</td>
<td>Interested Citizen</td>
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<tr>
<td>Derek Van Norton</td>
<td>Interested Citizen</td>
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<tr>
<td>Ev Hamelin</td>
<td>Interested Citizen</td>
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<td>Garry Brimercode</td>
<td>Interested Citizen</td>
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<tr>
<td>Gwen Johannsen</td>
<td>Provincial IEP Committee (PIEPC) member</td>
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<td>Heather Hannaford</td>
<td>Interested Citizen</td>
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<td>Jack Fraser</td>
<td>Interested Citizen</td>
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<td>Jean Leahy</td>
<td>Interested Citizen</td>
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<tr>
<td>Jeff Beacke</td>
<td>Interested Citizen</td>
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<tr>
<td>Jen Eglund</td>
<td>City of Fort St. John</td>
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<tr>
<td>Kathleen O’Neill</td>
<td>Interested Citizen</td>
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<tr>
<td>Kay Hinley</td>
<td>Interested Citizen</td>
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<td>Ken Boon</td>
<td>Interested Citizen</td>
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<tr>
<td>Ken Forest</td>
<td>Landowner</td>
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Kirk Safford  Interested Citizen
Lynette Hewitt  NHA
M. Kroecher  Peace Valley Environmental Association (PVEA)
Margaret Little  Interested citizen
Mike Conway  Conway Electric
Mike Spirada  IUDE
Nancy Chulk  Interested citizen
Nelly Rodriguez  Interested citizen
Ray Stange  Interested citizen
Richard Labonne  Interested citizen
Roger Gregoire  Interested citizen
Ron Gallant  Interested citizen
Ruth Ann Darnall  Peace Valley Environmental Association (PVEA)
Senney Charleson  Interested citizen
Steve Hewitt  Alpine Environmental
Tony Atkins  Peace Valley Environmental Association (PVEA)
V. Kroecher  Peace Valley Environmental Association (PVEA)

BC Hydro/IEP Representatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Role</th>
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<tbody>
<tr>
<td>Mary Hemmingsen</td>
<td>Director, Power Planning and Energy Acquisitions, BC Hydro</td>
<td>Presenter</td>
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<tr>
<td>Rohan Soulsby</td>
<td>Manager Energy Plans and Supply Portfolios, BC Hydro</td>
<td>Presenter</td>
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<tr>
<td>David Conway</td>
<td>Community Relations, BC Hydro</td>
<td>Host</td>
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<td>Siohban Jackson</td>
<td>Stakeholder Engagement, BC Hydro</td>
<td>Note Taker</td>
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Introduction

Dave Conway welcomed everyone on behalf of BC Hydro and introduced the IEP team members present: Mary Hemmingsen and Rohan Soulsby.

Rohan and Mary provided an overview of the IEP process, what BC Hydro has learned from First Nations and stakeholders in the process, the attributes considered in the electricity plan deliberation, and the strategies currently being considered.
Rohan and Mary discussed the IEP process, and the key questions explored by the PIEPC, including the trade-offs between attributes across portfolios, and input from PIEPC, First Nations, regional stakeholder meetings and the public. Input received during the process can be viewed at www.bchydro.com/iep.

1. **What is an Integrated Electricity Plan (IEP)?**
   - A 20 year plan for meeting customer needs, but updated about every 2 years.
   - Ensures we meet customer electricity needs while factoring in financial, social and environmental considerations.
   - BC Hydro forecasts electricity demand to increase by about 1000 GWh every year moving forward.
   - As some existing electricity resources reach ”end of life”, and demand increases, new sources of supply and renewed effort to conserve are required.

2. **What We Heard in the Process**
   - Province-wide regional workshops and public information sessions in the spring
   - Province-wide First Nations workshops in the spring
   - 13 days of Provincial IEP Committee (16 representative of different interests)
   - Public polling and website / email input
   - Technical Resource Options (to develop the characteristics of different electricity supply resources)

3. **How Input was Used**
   - How much to build: what degree of energy **Self Sufficiency** is appropriate for BC Hydro to pursue?
   - What to build:
     - What overall **Resource Mix** should be pursued?
     - How much **Demand Side Management** to pursue?
     - BC Hydro-specific potential resources (Site C, Burrard Thermal)
     - Over twenty portfolios modeled, tracked impacts across seven financial attributes, forty social and environmental attributes

3.1 **How Much to Build?**
Options considered included - relaxing, maintaining, or increasing self-sufficiency criteria.
• BC Hydro plans to meet domestic requirements, even in low water (critical historic low water planning years), cold weather conditions (peak demand day every other year).

• Burrard Thermal currently provides a key piece of the self-sufficiency, even though we choose to import rather than run Burrard in many years, resulting in net import years by choice.

Overall Resource Mix

• Options considered included - Low Air Impacts, Low Land Impacts, 100 per cent Green, Diverse Resources, Low Cost

Demand Side Management

• Options considered included - Power Smart 3, Power Smart 4, Power Smart 5 (about 1/3 future needs)

Site C Option

• Options considered included - include Site C in a portfolio or exclude it

Future of Burrard Generating Station

• Options considered included - 2014 retirement, maintain BGS for capacity, maintain BGS for capacity, maintain Burrard for energy, repower Burrard (CCGT).

4. PIEPC Outcomes – Four Directions for B.C.’s Energy Future

• Each strategy had at least one committee member with a first preference.

• Gwen spoke as a PIEPC member, holding two main principles throughout her PIEPC participation while representing the northeast communities: 1) diversity of supply (away from water); and 2) should build generation close to load (risky to rely on a long supply line, line losses are inefficient, and raise awareness of need to conserve).

Common elements of proposed strategies:

• self-sufficiency (plus a small buffer)

• demand side management

• cost risk,

• Site C and past grievances,

• Transmission Projects are a common need across all four strategies
The following comments and participants’ questions have been sorted under broad themes:

Resource Options in B.C.

- How do Downstream Benefits work (DSBs)? The province has assigned Downstream Benefits (DSBs) to Powerex to market on behalf of B.C. These assets are available to be returned for BC Hydro’s use as a premium capacity resource—which means they have a very high value. When they are sold the income flows back to BC Hydro to the benefit of the ratepayers. The first $200M of revenue from Powerex is returned to BC Hydro to offset costs that would otherwise flow through to rates.

- What are the costs and attributes of the various resource options? For the 2 strategies that do not include Site C the emphasis shifts to green, coal, gas or other resource mixes. The Resource Options Report on BC Hydro’s website catalogue the costs and other attributes of all supply options.

- What is the demand/supply trend? With short-term spikes in natural gas prices, fuel switching (e.g. switching from gas to electric home heating) is occurring, resulting in BC Hydro seeing actual loads higher than forecasts. Through forecasting BC Hydro continually tracks market trends and consider them in developing its long-term supply/demand balance.

- Has BC Hydro looked at the Fraser Canyon for power, or other rivers for in-river turbines? The Energy Plan limits BC Hydro’s consideration to Site C; however, Independent Power Producers can look at other rivers for possible development.

- Why is BC Hydro not building the small hydro and other projects? The Energy Plan prohibits BC Hydro from building anything other than Site C (and only with Cabinet approval) and resource upgrades.

- Can individuals resell power into the grid? BC Hydro has a net-metering program that has been recently improved.

Local and Regional

- What does public polling show? Polling should emphasize local opinions when a local resource is being considered. Polling results can be viewed on at www.bchydro.com/iep

- What are peoples’ perspectives on regional impacts and benefits? Looking at the resource options chart, while there are available resources in high load areas (e.g., Vancouver Island), resistance prevents the development of some resources. This raises the question of regional distribution of impacts and benefits.

- While impacts of local projects stay in the region, participants were interested in understanding how potential benefits could stay in the region, mentioning the idea of preferable regional rates, employment benefits (and impacts), and specifically
how much money would stay in the region. Right now everyone pays the same - a new rate class or structure would require a change through the BCUC.

Cost Attributes

- BC Hydro explained that across the four strategies, the cost range is from about $4.5B - $4.75B in terms of net present value (NPV), with the “greener” portfolios being more expensive. The portfolio estimates are at a very high level, as most estimates are for generic resource types, and not for specific projects with robust capital estimates.
- For all resources, including Site C, costs were updated to a common point in time through the Resource Options report (on BC Hydro’s website). The costs of Site C include project development costs, estimates of environmental and social mitigation and compensation, transportation rerouting etc.
- The Net Present Value does not include the value of resources past 20 years, whereas a large hydro project life is about 70 years and a wind project is about 20 years.
- It is usually cheaper to send gas through a pipeline than to send electricity over a transmission line, but specific circumstances can change that scenario.
- BC Hydro has some of the lowest priced power in the world; some feel that switching to a reliance on gas is risky.

Environmental and Social Attributes

- Site C, and other large hydro, is not considered “green” according to the federal standards setting the green criteria (Eco-Logo).
- Comparing across resources, about 500 wind turbines equal Site C.
- The building of generation near load (as Burrard currently provides) is one expressed value, however the full costs of all sites were included such as transmission losses associated with remote generation sources.
- As the IEP planning is very high level, detailed environmental and social considerations were not included (e.g., species at risk presence or absence), however all projects would go through appropriate environmental and other permitting processes (federal or provincial) before becoming committed projects. Furthermore, specific consideration of First Nations impacts and benefits is within each project.
- To the extent that Site C project-specific impacts or benefits are known (e.g. tourism and recreation) they are considered within the current project costs.

BC Hydro System and Trade

- Burrard Thermal is currently available on an annual basis as a capacity resource, meaning it is available as needed to meet peak demand. To make Burrard efficient
and available for energy would require full repowering, converting it to a CCGT (combined cycle gas turbine) plant. The result would be that the plant would run often, would increase BC Hydro’s overall emissions profile, and would result in future gas price risk.

- All new resources built for BC Hydro’s supply needs (including Site C) are to meet domestic reliability criteria (peak demand 9 of 10 years, and energy needs in sequence of low water years). BC Hydro on average has more than it needs to meet domestic requirements because of the reliability criteria, and Powerex trade exports surplus, and imports energy, in order to optimize the availability and value of the system resources over time. The PIEPC rejected the notion of building for export, but supported the notion of building for reliable domestic self-sufficiency, with a small insurance buffer.

- BC Hydro explained the strategy table. In the list of strategies the first two factors are attributes (self-sufficiency, resource mix), and the other three are resources (demand-side management, Site C, Burrard). This is because DSM, Site C and Burrard are specific project decisions that need to be made by BC Hydro that have large energy impacts on the portfolios, whereas self-sufficiency affects the amount and timing of resource needs, and resource mix affects the types of resources one can put into a portfolio.

- How does water balancing work? How is it connected to energy coming in and going out of B.C.? Because the water levels in the hydro system go “up and down” through the seasons and across years, the use of trade outside B.C. (importing and exporting) allows BC Hydro to provide energy to customers even when the water availability does not match demand.

- Are the Downstream Benefits included in the import/export figure? The Downstream Benefits (DSBs) are not included in the import/export figure. DSBs contribute about 500 average MW.

- Where does BC Hydro import power from? BC Hydro imports power from 2 principle markets - the mid-Columbia hub and the Alberta power pool. Depending on the timing and nature of electricity products the price changes and drives whether Powerex imports or exports.

**BC Hydro’s Engagement Process**

**IEP and the Provincial Committee (PIEPC)**

- PIEPC membership was determined from a BC Hydro “request for interest” to about 800 people from many organizations. Applications were reviewed by representatives from BC Hydro and the Ministry of Energy and Mines. PIEPC representatives were sought to represent regional diversity, residential and customer groups, First Nations, youth and environmental interests.

- PIEPC members indicated their first and second choice preferences across the four strategies. The first choices were distributed across all four strategies, and second
choices were clustered around strategy two. Specific PIEPC discussion is documented in minutes on BC Hydro’s website www.bchydro.com/iep.

- Participants were interested in understanding the impact of a project (like Site C) in a cumulative sense, to understand how each project contributes incrementally to a region’s overall impact.

- Participants were concerned that, from a “voting” perspective, residents of the lower mainland and Vancouver Island would have a larger voice. BC Hydro committed to continue to represent the views of each region throughout the IEP process and in considering the options.

Site C Engagement Process

- If Site C is selected as a final IEP strategy, the next steps would be laid out by BC Hydro and the government. The provincial government has laid out a series of stages for Site C if it is a final IEP strategy. The next stage, Stage 2, involves community consultation and understanding of the environmental and social impacts.

Additional suggestions from participants:

- Would you ask the people of B.C. if they would be willing to pay 5 per cent more for green power? BC Hydro continues to explore resource options and compare costs but rate increases must be approved by BCUC.

- Suggestion that the dollar values should have been included in the various portfolios as presented.

- Jack Fraser - wants information with respect to damming the Fraser River.

- Change the green reference under Strategy 2 to “mostly green”.

Meeting held on October 27, 2005 at the Super 8 in Fort St. John