

2008 Annual Report



BC Hydro's Electricity Conservation
& Efficiency Advisory Committee

2008 Members of the EC&E Advisory Committee

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Natural Resources Canada

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David Craig

Commercial Energy Consumers of BC

Barbara Docherty

Independent Power Producers Association of BC

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Simpcw First Nation

Jon Garson

BC Chamber of Commerce

Tom Hackney

Sierra Club of Canada - BC Chapter

Stephen Hobson

Director, Power Smart, BC Hydro

Matt Horne

Pembina Institute for Appropriate Development

Len Horvath

Building Owners and Managers Association of BC

Michelle Larstone

BC Hydro customer

Art McDonald

School Plant Officials Association of BC

John Newcomb

Member at Large affiliated with the University of Victoria, CRD Advisory Committees and BC Sustainable Energy Association

Andrew Pape-Salmon

Ministry of Energy, Mines and Petroleum Resources
(*ex-officio*)

Dan Potts

Joint Industry Electricity Steering Committee

Nic Rivers

Simon Fraser University

John Robinson

University of British Columbia

Dan Smith

First Nations Summit

Sarah Smith

Terasen Gas

Michelle Taschereau

Brite-Lite Vancouver Inc.

Bev Van Ruyven

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Doug Wittal

Canadian Home Builders Association

Chandra Wong

BC Hydro customer

A Message from the Advisory Committee

There is no doubt that the challenges facing BC Hydro are formidable.

Forecasts indicate that the demand for electricity in this province will continue to grow over the next 20 years, creating a gap between what BC Hydro can supply through its own current generating facilities and what the people and businesses of British Columbia will require. On top of that, the provincial government's 2007 Energy Plan sets an ambitious conservation target for BC Hydro – a target that can be met only through profound changes in the way we in this province currently use electricity.

BC Hydro established the Electricity Conservation and Efficiency (EC&E) Advisory Committee to provide advice on how to achieve its electricity conservation and efficiency goals. It is our goal – and a responsibility that we take very seriously – to generate the ideas that will help inspire a comprehensive culture of conservation across British Columbia.

In 2007, our first full year in operation, we examined the energy-demand issues facing BC Hydro in detail. Following that necessary groundwork, we presented BC Hydro with a Strategic Framework that we feel provides a solid direction for how everyone in British Columbia – individuals and families, communities, businesses, industries, governments and BC Hydro itself – can work together to make our province a leader in energy conservation.

BC Hydro has now adopted this framework as a crucial part of its planning process and intends to enlarge its focus to include initiatives designed to encourage a comprehensive culture of conservation at three levels: individual, market and societal. Through this larger focus, all of us on the Committee now believe that BC Hydro will be able to achieve the Provincial Energy Plan target of meeting at least 50 per cent of future incremental electricity resource needs by 2020 through conservation and efficiency measures. In fact, many of us believe that target is not bold enough, and that BC Hydro can and should aim even higher.

Over this past year, we began to move from high-level discussions about ideas and principles to more specific projects intended to generate detailed recommendations to expand or improve BC Hydro's current conservation initiatives and programs, and move from electricity conservation to the broader energy conservation. In this way, we believe that BC Hydro can become a true catalyst for fundamental and long-lasting change in the way that British Columbians think about and use all forms of energy, not just electricity.

We look forward to continuing to study these important issues and proposing innovative ideas for new programs, policies and initiatives.

Sincerely,

The Members of the Electricity Conservation and Efficiency Advisory Committee

A Message from the President & CEO of BC Hydro

I would like to thank the members of the EC&E Advisory Committee for their time and commitment to improving BC Hydro's energy conservation and efficiency initiatives for 2008. The members of this Committee bring with them years of accumulated experience in a range of subjects related to energy conservation and efficiency.

In B.C., we are fortunate enough to have built a large hydroelectric system that provides us with clean power. At BC Hydro, we are called to conserve energy and protect this resource, for generations. However, as our province grows, the gap between supply and demand will continue to widen, leaving us with a choice: build more generating capability; buy more from outside (not always clean) sources; or find ways to encourage British Columbians to use less energy, more efficiently.


The last choice is obviously the best, economically and environmentally, and it is supported by the provincial government, which has set a target for us to meet future electricity needs through conservation and efficiency.

I am very proud of our conservation initiatives; in particular, our Power Smart programs and Power Smart Excellence Awards. It's important to recognize leaders and innovators in the field of energy conservation and efficiency because they are creating a conservation culture for B.C.

BC Hydro can't get there alone. We must expand our role and our partnerships, and we will need – as the EC&E Advisory Committee has rightly pointed out – to go beyond our current Power Smart programs and into new and uncharted territory that involves trying to influence change not only in individual consumers, but also in the private-sector to encourage investors and developers to embark on energy-efficiency projects, and across all of society, to make energy conservation and efficiency the right thing to do.

The EC&E Committee helps us understand the values, interests, motivations and concerns of everyone with a stake in energy conservation and efficiency – including First Nations, governments, other utilities, industry, private and non-profit sectors – and to provide us with the ideas and advice we will need to achieve our goals.

Sincerely,



Bob Elton

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"British Columbia's energy utilities – as well as provincial, federal and local governments, First Nations, the private sector, industry associations and non-profit organizations – are all delivering a wide range of energy conservation and efficiency initiatives. The EC&E Committee offers an opportunity for dialogue, an opportunity to work together to build a vision and a consensus about what demand-side management should be. It's also a great opportunity for BC Hydro and other industry players to prepare the market for changes in government policy that will eventually lead to true market transformation."

EC&E Advisory Committee Member Andrew Pape-Salmon, Ministry of Energy, Mines and Petroleum Resources

About the Committee

History

BC Hydro established the Electricity Conservation and Efficiency (EC&E) Advisory Committee in 2006 to help it develop new and more effective ways to address the two key challenges facing the corporation in the future:

1. Rapidly increasing demand for electricity

Forecasts indicate that, over the next 20 years, the demand for electricity in British Columbia will grow significantly.

While BC Hydro will buy more electricity from external sources and develop additional generating capacity at its existing hydroelectric facilities, energy conservation and efficiency remains the best method – both economically and environmentally – for meeting increased demand.

2. New Goals for Cost-Effective Energy Efficiency and Conservation

On February 27, 2007, the B.C. Government released *The BC Energy Plan: A Vision for Clean Energy Leadership*. Building on the 2002 *Energy Plan*, this latest plan looks to all forms of clean alternative energy to meet the future energy needs of British Columbians. It also sets a goal for BC Hydro to acquire at least 50 per cent of its “incremental resource needs” – 50 per cent of what it will need to meet future increased demand for electricity – through electricity conservation and efficiency by 2020.

Recent legislation goes even further, instructing utilities to pursue all cost-effective demand-side management (DSM) measures.

For BC Hydro, DSM means taking actions that will help reduce customer demand for electricity and, as a result, also help defer the need for BC Hydro to develop new generating facilities.



Electricity *conservation* refers to reducing the use of electricity; this can be through improved efficiency or simple reductions in energy use - such as remembering to shut off the lights or a computer monitor when they're not in use.

Electricity *efficiency* means using less energy to provide the same level of energy service. It is achieved most often through the use of more efficient technology – such as replacing incandescent light bulbs with compact fluorescents, or adding insulation to keep a home at a comfortable temperature with less heating or air conditioning.

Purpose

The EC&E Advisory Committee provides a practical means for a broad range of stakeholders from across the province both to be heard *and* to have a tangible impact on the electrical future of British Columbia.

The Committee's purpose is to help BC Hydro identify and remove the barriers that may be blocking British Columbians from embracing electricity conservation and efficiency.

It provides informal advice and formal recommendations to BC Hydro on how to:

- Improve the design and delivery of current electricity conservation and efficiency programs and initiatives to encourage more BC Hydro customers to make a dramatic and permanent reduction in their electricity use.
- Develop new programs and initiatives that will successfully engage British Columbians across the province in electricity conservation and efficiency.
- Encourage the involvement of even more stakeholders in planning BC Hydro's programs and initiatives and how best to work with stakeholders in any future stakeholder processes.

Structure

The 23 members of the EC&E Advisory Committee include residential BC Hydro consumers as well as representatives from:

- First Nations
- independent power companies
- business and industry
- utilities
- local, provincial and federal governments
- academics, and
- (non-government) environmental organizations.

Three BC Hydro staff members also participate on the Committee to provide insight into BC Hydro programs, plans and activities.

An independent facilitator – Dan Johnston of Hope Johnston & Associates Law Corp – was jointly selected by the EC&E Advisory Committee and BC Hydro to chair the Committee. A project management team from BC Hydro's Stakeholder



The Strategic Framework recognizes that people can be influenced in a number of different ways to make changes in the way they behave and the decisions they make.

To date, BC Hydro has largely focused on reaching individual consumers – or the individual context – through demand-side management programs. The Strategic Framework describes two other ways for BC Hydro to reach British Columbians that each has considerable leverage over the individual context:

1. Market context – Using the parameters of the marketplace, such as rights and responsibilities, prices and information to influence market-actors to support energy efficiency, and
2. Societal context – Applying patterns of living, work shopping and education to make energy efficiency the “right” thing for society as a whole to engage in. These patterns include land-use, community density and infrastructure.

Engagement department provides support.

2008 Members

A detailed list of the 2008 members appears on page 1.

Working Groups

In 2007, its first full year in operation, the EC&E Advisory Committee established a number of small Working Groups of committee members to concentrate on specific areas of interest. They are responsible for reporting back to the larger Committee with their conclusions and recommendations; the full Committee then assesses and refines these recommendations before formally bringing them forward to BC Hydro.

The EC&E Advisory Committee typically meets every other month within the calendar year beginning in January. The Working Groups meet once a month or as required.

Over the past year, the Working Groups included:

- The **Rates Working Group**, which continued to study how rates – when used as a conservation tool – can affect customer behaviour, and provided advice on current rate structures.
- The **Strategic Framework Working Group**, which continued to refine and build upon the Strategic Framework the Committee submitted to BC Hydro last year to help the corporation pursue its conservation and efficiency goals.

The Committee also added two new Working Groups in 2008:

- The **Split Incentives Working Group**, to identify the barriers to energy conservation and efficiency specifically faced by developers, property owners and occupants.
- The **Risk Management for Business and Industry Working Group**, to examine how risk affects the way both private-sector businesses and BC Hydro make decisions related to energy-efficiency projects.



“BC Hydro’s current Power Smart program is good, but it’s not enough. The provincial government’s 2007 Energy Plan requires BC Hydro to acquire 50 per cent of its incremental resource needs through energy conservation and efficiency by 2020. That’s huge. That’s much higher than Power Smart can deliver as it stands now. And if BC Hydro aims for 100 per cent, as President Bob Elton has said he’d like to do, you’re talking double that effort. So our role is crucial: we must help BC Hydro move the goal posts to a higher level.”

EC&E Advisory Committee Member John Robinson, University of British Columbia, Institute for Resources Environment and Sustainability

Major Projects

The EC&E Advisory Committee believes that, while BC Hydro has a good deal of direct influence on *individual* decisions about electricity conservation and efficiency, it has far less direct influence on the markets for energy efficiency and the will of society as a whole to conserve energy.

At the same time, however, the Committee believes that BC Hydro can and should become a key player in (1) transforming how the market – including private-sector investors as well as property developers and owners – views energy efficiency, and (2) facilitating the evolution of social patterns and norms so that conservation and efficiency gradually become part of the everyday fabric of life in this province.

The Committee’s major projects for 2008 were driven by BC Hydro’s decision to adopt the Strategic Framework it recommended in 2007. That framework depicts three contexts – individual, market and societal – that influence peoples’ decisions and behaviours.

Creating a Market for Energy Efficiency

Purpose: To identify and assess opportunities for BC Hydro to increase private-sector investment in energy efficiency and conservation in B.C.

Key Action in 2008: At the request of the EC&E Committee, BC Hydro has begun pursuing a number of market-level initiatives, including an Opportunity Assessment that will:

- identify why the private sector in B.C. is not currently pursuing cost-effective energy-efficiency opportunities
- identify and assess market-based strategies and tactics to increase private-sector investment in energy efficiency, and
- identify and assess options for how BC Hydro can implement these strategies and tactics.

Encouraging Change at the Societal Level

Purpose: To gain a greater understanding of how patterns of living – such as going to school, working and shopping – influence both how the market functions and the way individuals choose to live, and assess how BC Hydro can help make changes at the community or societal level that would encourage greater conservation and energy efficiency.

Key Action in 2008: The Strategic Framework Working Group took the lead on this project in 2008 and completed a discussion paper called *Pursuing Energy Conservation and Efficiency at the Societal Level*. The paper asks and answers four central questions:

- What are the societal norms and patterns that affect electricity use?
- How can we change the societal norms and patterns that affect electricity use?
- Who (what partners) can we involve to help us change the societal norms and patterns that



To achieve electricity conservation and efficiency in new homes at the individual, market and societal levels, BC Hydro could encourage:

- Owners and builders to add a range of energy-efficiency measures in their new homes.
- Governments to establish minimum energy-efficiency standards for new homes.
- Society as a whole to reconsider how big their new homes really need to be.

affect electricity use?

- What should BC Hydro do to influence the societal norms and patterns that affect electricity use?

Moving to Net-Zero Communities

Purpose: To encourage net-zero homes, buildings, industries and communities.

This project will:

- examine existing net-zero projects and initiatives in B.C. and other jurisdictions
- explore and provide advice to BC Hydro on short-, medium- and long-term net-zero and distributed generation strategies, and
- advise BC Hydro about how it can strengthen its current programs by developing community partnerships, engaging local governments and building public awareness of energy conservation and efficiency.

Key Action in 2008: The Committee began to look specifically at the possibilities for distributed generation and how it can help BC Hydro define its role in implementing a distributed generation strategy. The Committee is now advising BC Hydro on:

- existing distributed generation technology
- the implications of distributed generation to individuals, markets and society in general, and
- how to define what customers will require from distributed generation.



A net-zero home, building, industry or community is one that is capable of producing as much energy as it consumes over the year.

To achieve net-zero, homes and buildings will need to be connected into an integrated, renewable energy system that allows them to draw power only as needed, and send any excess power back to the grid.

This integrated system will require what's known as distributed generation – energy generated on the site where it will be used.



"I'm involved in the issue of energy conservation and efficiency because of the urgent need to implement climate change solutions. Finding ways to use less energy and use it more efficiently is critical in our efforts to cut greenhouse gas emissions – and that's where the value of this Committee lies for me. We have to open up discussions and shift perceptions in order to make the big step changes we need to make, and that won't happen without this kind of collaborative endeavour where everyone – governments, NGOs, business, utilities, etc. – comes to the table in good faith. It gives me hope we will come up with the right solutions."

EC&E Advisory Committee Member Matt Horne, Pembina Institute for Appropriate Development

Improving Demand-Side Management Planning

Purpose: To provide recommendations to BC Hydro on its 20-year Demand-Side Management Plan – intended to help the corporation to achieve both its vision for energy efficiency and the Province's conservation targets – including areas where the corporation could improve or expand the plan over time to take advantage of new and innovative energy-saving opportunities, particularly at the market and societal levels.

Key Action in 2008: At the Committee's request, BC Hydro commissioned a well-known and experienced demand-side management consulting firm, Summit Blue Consulting, to review the version of the plan that BC Hydro filed with the BCUC in June 2008.

Summit Blue will assess the plan's development process and content, as well as the extent to which the current plan reflects the Committee's recommendations to BC Hydro, and present its findings to the Committee in 2009.



The “split incentive” barrier is created by the fact that many commercial and residential tenants are required to pay their own energy costs, but because they do not own the property, they are often reluctant to invest in the property’s energy efficiency. At the same time, developers and landlords are also reluctant to invest in energy efficiency, because they are not required to pay energy costs.

Removing the Split Incentive Barrier

Purpose: To examine – and identify possible solutions for removing – the substantial barrier to energy efficiency in both the commercial and residential sectors created by the lack of incentives for developers and landlords to save energy.

Key Action in 2008: Recognizing the breadth and complexity of this issue – and recognizing that developers/owners and tenants have different perspectives when it comes to conservation and energy efficiency, and will require different incentives to participate in conservation programs – the Committee invited a broad range of stakeholders to join the Split Incentives Working Group.

The Group includes representatives from the BC Apartment Owners and Managers Association, the BC Sustainable Energy Association, the Building Owners and Managers Association of BC, City Green Solutions, the Condominium Home Owners’ Association, Lougheed Town Centre, Metro Vancouver Housing Corporation, the Ministry of Energy, Mines and Petroleum Resources, the Pembina Institute for Appropriate Development, the Sierra Club–BC and the Tenant Resource & Advisory Centre.

The Group’s first meeting on November 20, 2008, concentrated on landlord/tenant issues. A second, full-day session in January 2009 will continue to explore such questions as:

- Does the type of property make a difference – for example, old or new, residential apartment versus condo building – to the willingness to pursue energy-efficiency projects?

- What are the best levers to encourage developers and owners to make investments in energy efficiency?
- Why doesn’t everyone use a Green Lease – a lease that includes provisions to ensure landlords and tenants operate a property sustainably?

Reducing Risk for Business and Industry

Purpose: To examine how the risk associated with long payback times holds business and industry (especially those facing uncertain or negative market conditions) back from investing in energy-efficiency projects, and to explore options for BC Hydro to help mitigate this risk.

Key Action in 2008: The Committee created the Risk Management for Business and Industry Working Group to lead the work on this project. In 2008, the Group:

- explored a range of issues and questions around the impact of business failure on energy efficiency
- examined BC Hydro’s risk policies to determine if they were limiting investment in energy efficiency, and
- studied whether current BC Hydro programs could absorb increased risk.



“Our association represents the commercial building industry, which accounts for a third of the energy used in this province. We’ve seen in other jurisdictions what can happen if we don’t achieve our conservation targets: either the cost of energy is going to skyrocket, or we’re going to run out of power and have rolling brown-outs like they did in California a few years ago. We have to be part of the solution, because the alternatives are just too disastrous to contemplate.”

EC&E Advisory Committee Member Len Horvath, Building Owners and Managers Association of B.C.

Enabling Government Policy

Purpose: To determine how best to encourage all levels of government – local and First Nation, provincial and federal – to change existing policies, legislation or regulations to provide greater support for energy conservation and efficiency projects. This project will:

- define the key barriers to energy conservation and efficiency that could be addressed through government policy
- prepare case studies of successful collaborative efforts between public utilities and policymakers in other jurisdictions, and
- devise a method for BC Hydro and the EC&E Advisory Committee to work jointly with governments to develop policy solutions.

Key Action in 2008: A sub-set of the EC&E Advisory Committee drafted a Project Charter outlining the key issues to be examined through this project, such as how to build the political will necessary for governments and communities to fully engage in energy conservation and efficiency, and how to coordinate efforts between governments and BC Hydro on policy, legislative and regulatory initiatives.

The sub-group delivered the draft Project Charter to the larger Committee for discussion; it is now being revised based on the Committee's feedback.



"I am participating on the EC&E Committee to keep track of what's going on at BC Hydro and to keep the ratepayer interests front and centre. Many industries are located in this province only because we have low cost-based rates, which has given them a competitive advantage. And BC Hydro and other members of the committee must consider that interest when making recommendations that may impact rates."

*EC&E Advisory Committee Member Dan Potts,
Executive Director, Joint Industry Electricity
Steering Committee*



A stepped rate is a two-step price structure – intended to encourage conservation – where BC Hydro charges its customers a lower rate for a set amount of electricity consumed per month and a second, higher rate for electricity consumed over that amount.

By using less electricity and staying within the step 1 rate, customers can keep their electricity bills lower.

Developing a Long-Term Rate Strategy

Purpose: To support BC Hydro's residential, industrial and commercial customers in pursuing energy-saving opportunities by:

- exploring the role rates – including stepped rates – can play, if any, as a driver for conservation and efficiency
- examining different rate options and their implications for consumers (especially low-income) and the economy, as well as their effectiveness in reducing energy use, and
- providing recommendations to BC Hydro about how best to communicate possible rate changes to consumers.

Key Action in 2008: The Rates Working Group classified various rate-design elements by four cost types – cost of customer service, cost of secure supply, cost of service in peak winter periods, and cost of new supply – to provide a foundation for examining the impact of, and connection between, rate cost and design.

The Group also conducted a preliminary examination of the Large General Service (LGS) rate structure and provided BC Hydro with its initial thoughts about how a stepped rate may be used with this group of large consumers to drive conservation. (Customers become LGS when their demand is greater than 35 kilowatts at least one month in the billing year – about 13,000 of BC Hydro's commercial customers are currently in the LGS rate class.)

Future Outlook: 2009

Over the coming year, the EC&E Advisory Committee will continue to pursue more opportunities to involve more individuals, property developers and owners, communities, governments, businesses and industries – in short, more British Columbians of all kinds – in energy conservation and efficiency.

The Committee will also continue to provide advice on BC Hydro's current conservation and efficiency initiatives, and to generate new and innovative approaches to help BC Hydro meet or exceed the ambitious targets for electricity savings laid out in the *2007 BC Energy Plan*.

Specifically, the EC&E Advisory Committee will continue to:

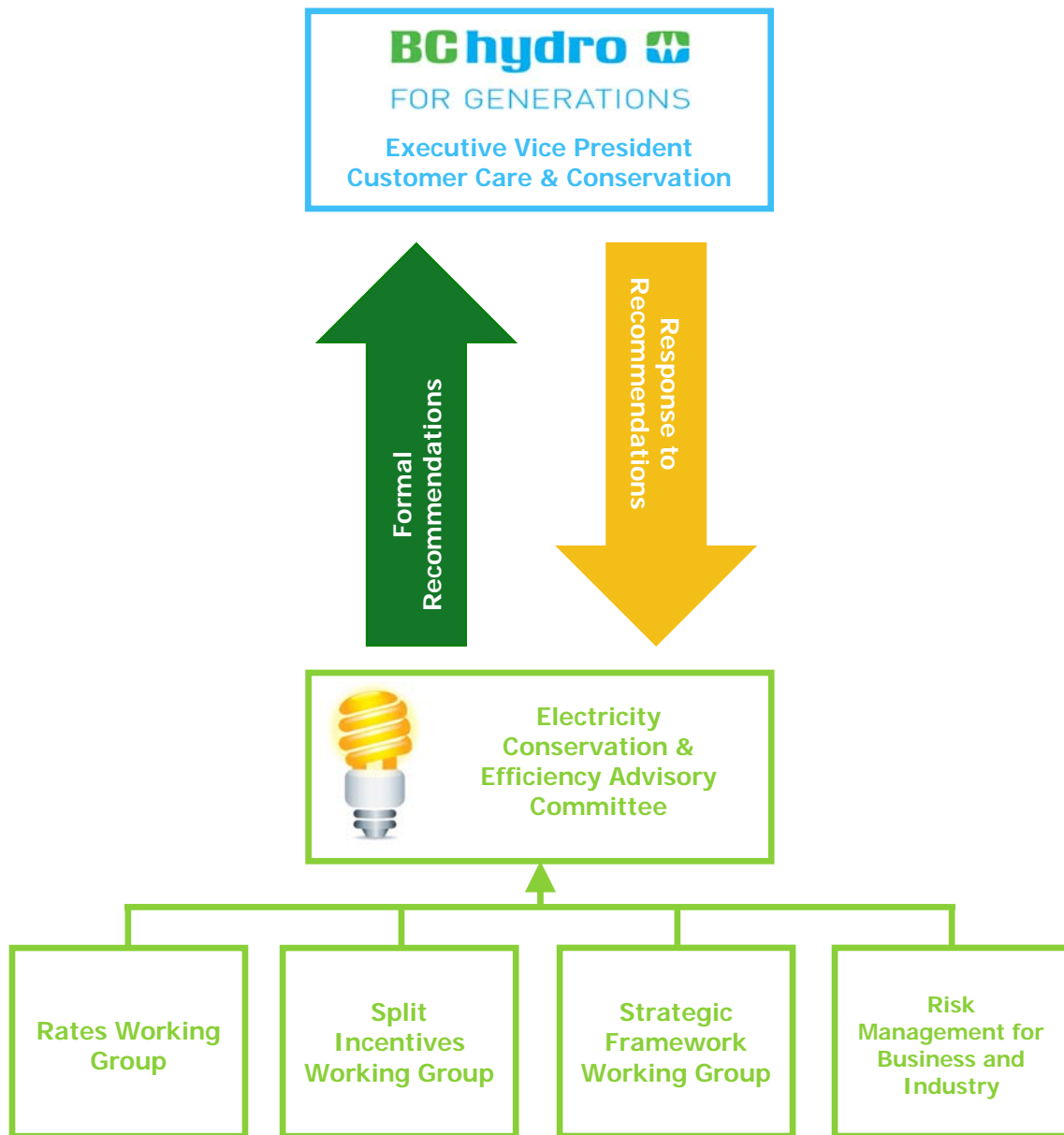
- Identify and assess opportunities to increase private-sector investment in energy efficiency.
- Provide recommendations to BC Hydro on initiatives that will move toward the development of net-zero communities.
- Explore the viability of distributed generation and BC Hydro's role in implementing a distributed generation strategy.
- Identify potential solutions to the split incentives issue and provide recommendations to BC Hydro on what it should do to address the differing needs of property developers, owners and occupants.
- Identify government partners and influencers and provide recommendations to BC Hydro on how it can successfully collaborate with governments on policies, legislation and regulations that support energy conservation and efficiency.
- Explore the questions raised in the *Pursuing Energy Conservation and Efficiency at the Societal Level* discussion paper and provide recommendations to BC Hydro on its role in influencing societal change.
- Examine how electricity rates affect conservation and the impact of rate changes on society and the economy, and provide advice to BC Hydro on how to address the implications of new stepped rate structures.
- Provide recommendations to BC Hydro on how it can refine and improve future Demand-Side Management Plans based on findings from consulting firm Summit Blue.



"For us, this Committee has value in terms of providing more opportunities to collaborate, not only with BC Hydro, but also other Committee members."

EC&E Advisory Committee Member Sarah Smith, Manager of Marketing and Energy Efficiency, Terasen Gas

Appendix A: Committee Structure



Appendix B: BC Hydro's Letter of Response to the EC&E Advisory Committee's Recommendations in 2008



FOR GENERATIONS

March 31, 2009

Dear EC&E Advisory Committee:

Re: BC Hydro's Responses to 2008 Pilot and Study Recommendations from the Electricity Conservation & Efficiency Advisory Committee

Thank you for your continued commitment to create a culture of conservation here in British Columbia. Your ongoing efforts are of great value to BC Hydro and to the people of British Columbia, and will help us to achieve increasing levels of energy conservation and efficiency.

As you are aware, recent legislation instructs utilities to pursue all cost-effective demand side management and the BC Energy Plan has set a target of meeting at least 50 percent of future incremental energy needs through conservation by 2020. To this end, BC Hydro has recently established a target of meeting over 70 per cent of future energy needs through conservation. With the support and creativity provided by the members of the Advisory Committee, it's possible we could achieve even more than this.

This year you provided BC Hydro with a recommendation to pursue a number of potential pilots and studies to advance our energy efficiency and conservation efforts, while recognizing that limited resources would impact the feasibility of meeting all the project targets, and acknowledging that there may be many more opportunities not yet identified or explored.

We have had the opportunity to review your recommendations, and are pleased to provide an update of the status of many of the pilots and studies identified in Appendix B. As you will see, we agree with many of your recommendations.

Thank you again for your commitment and support. I look forward to your continued input and advice.

Yours truly,

A handwritten signature in black ink, appearing to read "Bob Elton", with a long horizontal line extending from the end of the signature.

Bob Elton
President & CEO
BC Hydro

APPENDIX A
EC&E Recommendations to BC Hydro

The Strategic Framework Working Group put forward the following recommendations to the EC&E regarding pilot projects:

- a) The Working Group recommends aggressive pursuit of all potential pilots listed in the Draft Project Summary document, recognizing that:
 - i) Limited resources will impact the feasibility of doing so; and
 - ii) There could be many more opportunities not yet identified or explored
- b) The Working Group also requested that BC Hydro shall provide ongoing updates with respect to all of the initiatives identified as underway in the Draft Project/Pilot Summary document
- c) No specific recommendations were given with regards to prioritization of the pilot projects

The EC&E Advisory Committee agrees with the Strategic Framework Working Group and recommends that BC Hydro pursue all potential projects identified below, recognizing that limited resources will impact the feasibility of doing so and there could be many more opportunities not yet identified or explored.

TOPIC	STUDIES/STRATEGIES		PILOTS/INITIATIVES	
	Underway	Potential	Underway	Potential
Net-zero	BC Hydro strategy for customer-based distributed generation	District energy potential mapping (BCH)	Feasibility studies to pilot smart growth strategies	Net-zero/ distributed generation (BCH/ EC&E)
	BC Hydro Sustainable Community DSM program development	Exergy-efficient analysis tool for community energy supply (BCH)	CIERS building	District energy and GHG-neutral heating projects (EC&E)
	Net-zero roadmap (MEMPR leading, BC Hydro participating)		New Home partnership: net-zero home	
	Strategies for energy utilities to address emerging sustainable neighbourhood developments		Solar photovoltaic at Kamloops school	
Private sector investment in energy efficiency	Opportunity assessment		Residential building labelling	Local improvement charges (EC&E)
				Energy performance requirements at time of sale (EC&E)
				Commercial building labelling (BCH)

				Using codes and standards to push market (EC&E)
				ESCO template (EC&E)
Split incentives		Scoping study (BCH)		Differentiated building development cost charges and building permit fees (EC&E)
				Expedited building permit (BCH)
Societal level work		Scoping paper (BCH)		Summit meeting (EC&E)

DESCRIPTIONS OF SELECTED ITEMS

Studies/Strategies

Exergy-efficient analysis tool for community energy supply

BC Hydro is considering providing funding and advisory support to an international multi-client effort to develop an exergy-efficient analysis tool for community energy supply. The product would be a spreadsheet-based tool that would enable utilities and communities to compare and optimize the usefulness of various energy streams (such as solar, biomass, etc) and distribution techniques.

Net zero roadmap

MEMPR is leading the development of a strategy and program to demonstrate near net zero buildings. BC Hydro is participating along with others including NRCan, Fortis, and Terasen. The intent of the program is to understand the potential and barriers for development of near net zero buildings by working with proponents of net zero through demonstration projects. This program is expected to provide learnings that will support development of a roadmap.

Strategies for energy utilities to address emerging sustainable neighbourhood developments

BC Hydro is participating in a multi-client study on supplying the energy needs of sustainable communities. The scope includes distributed generation and net-zero energy neighbourhoods. The final draft report is due September, 2008.

Pilots/Initiatives

Net-zero/distributed generation

Find communities and customers to target moving to “net-zero” through a combination of activities.

District energy and GHG-neutral heating projects

BC Hydro to support such projects. A pilot would involve working with one or more project proponents.

Local improvement charges

LICs are currently used by municipalities to pay for infrastructure improvements such as roads or sidewalks that benefit a neighbourhood. Benefiting property owners pay for the improvements through property taxes. LICs could be adapted to finance energy efficiency improvements in residential and commercial buildings. A pilot would involve working with one or more municipalities to test LICs in practice.

Energy performance requirements at time of sale

Require homes and buildings to meet minimum energy performance requirements at time of sale pilot: Municipal pilot of energy performance requirements.

Using codes and standard to push market

Similar to the California vehicle emissions standard which mandates that over time a small percentage of vehicles sold in California by each of the large manufacturers must be zero-emission. This policy could be similarly applied to energy efficiency. For example, 10% of refrigerators sold in B.C. must be 25% more efficient than Energy Star. A pilot would involve targeting a product to push the market with codes and standards.

Pilots/Initiatives *cont'd*

Differentiated building development cost charges and building permit fees

Municipalities charge developers for development costs and building permits. These charges and fees could vary depending on the energy efficiency of the building. They could operate like a revenue-neutral “feebate”, where a less efficient building pays a charge and a more efficient building receives a rebate. A pilot would involve working with a municipality to test out differentiated charges or fees.

Expedited building permit

Similar to the above item, this pilot would test out whether allowing energy-efficient buildings to “jump the queue” in the building permit application process would lead to more energy efficiency in new buildings.

Summit meeting

Form a partnership of industry or business organizations, NGOs, utilities and governments that meets annually to endorse energy efficiency strategies and goals, share results, etc.

Solar PV at a Kamloops school

BC Hydro is participating in a solar photovoltaic (PV) demonstration project at a school in Kamloops to test out the feasibility and potential energy savings of solar to offset energy use. The data is being monitored for one year and results and conclusions are expected to be available in late 2008.

District energy potential mapping

A research effort to:

1. map existing and future heat load density sites,
 2. map future large development sites,
 3. map major road / sewer / water / utility infrastructure networks and replacement and maintenance schedules,
 4. map existing and future heat sources,
 5. Identify potential locations with high demand, supply, and likely development works over next 30 years and
- integrate findings into city planning and infrastructure. BC Hydro is looking for a municipality to pilot such a research effort.

Commercial building labelling

BC Hydro plans to partner with the City of Vancouver to pilot the energy performance labelling of 60 commercial buildings. The pilot would start in fall 2008 and test out the application of an energy benchmarking tools to actual buildings.

APPENDIX B

Update to the Status of the Projects

District-energy potential mapping study

BC Hydro has undertaken to partner with the City of Vancouver on a pilot project for this District Energy Potential Mapping in spring of 2009. Success of this pilot will be dependant on securing the partnership with the targeted municipality.

Exergy-efficient analysis tool for community energy supply

The project is led by NRCan. BC Hydro will contribute, with a variety of partners, expected to include Terasen Gas, funding and advisory assistance for this study. Stage 1 examines the state-of-the-art with regards to exergy in the energy industry, and is now complete. Stage 2 creates a calculation approach to exergy efficiency to identify what parameters are critical in optimizing the use of exergy. Estimated completion is late 2010. Stage 3 looks at translating the calculation process into a software model. Stage 4 develops that model and Stage 5 is a beta-test by users. The project is expected to complete in 2012.

Distributed generation

BC Hydro will continue to work with several customers on potential technology demonstration projects. Should these projects go ahead, they will further our knowledge of the technology, barriers, policy issues, grid connection, customer acceptance and market adoption considerations for distributed generation. A strategy for distributed generation is currently being developed. Targeted completion of the strategy is in summer of 2009.

District energy and GHG-neutral heating projects

BC Hydro has provided co-funding for feasibility studies for six district-energy projects to encourage and demonstrate the development of district energy and GHG-neutral heating projects. The projects are at varying stages of development, from the study and design phase to the implementation phase. The findings from these projects are being incorporated into the design of BC Hydro's Sustainable Communities program.

Local improvement charges (LIC)

In the fall of 2008, BC Hydro started work with potential partners, including NRCan, provincial ministries, City of Vancouver and other interested municipalities to identify barriers and mitigating strategies of using property tax (e.g., LIC) and other financing mechanisms to finance energy efficiency improvements in homes. Once a strategy is developed, BC Hydro proposes to work with a number of targeted municipalities for demo projects.

Commercial building labelling

BC Hydro is supporting a building labelling initiative with various partners such as MEMPR and NRCan. To complement this initiative, BC Hydro has agreed to develop an energy benchmarking tool which will be used to generate the appropriate performance metrics and analyses regarding the energy performance of a building. Population of the benchmarking tool is expected to begin in early 2010.

Residential Labelling

In conjunction with provincial and federal government, BC Hydro will promote home energy audits and the associated EnerGuide label to create public demand for and the acceptance of home energy performance labelling. BC Hydro's New Home Program provides incentives linked to MEMPR's audit and labelling initiative driving demand and building capacity for residential labelling. One of the goals of this work is to build the infrastructure to enable energy performance requirements at time of sale.

Update to the Status of the Projects *cont'd*

Using codes and standards to push market

Similar to its ongoing work with the provincial and federal governments on codes and standards, BC Hydro will advocate and provide technical assistance where applicable to the provincial and federal efforts to use codes and standards to push market for targeted energy efficiency technologies.

Municipal development policies

BC Hydro has had initial discussions regarding these policies with several targeted municipalities. Beginning in 2009, BC Hydro will work to secure partners to develop a strategy to identify and prioritize municipal development policies as well as to identify and resolve, where possible, barriers to implementing these policies. BC Hydro will continue to work with interested municipalities to secure partners to implement municipal development policy pilots.

Summit meeting

BC Hydro endorses the concept of a Summit meeting. BC Hydro believes that the success of a Summit meeting would be largely dependant on a broad range of partners and as such it should be driven by another organization. BC Hydro is interested in being a founding member of a Summit Meeting and providing support, in some form, to establishing the Summit Meeting.

ESCO template

As more information is required before BC Hydro is able to make a decision to pursue this initiative, BC Hydro will continue its work with the EC&E Advisory Committee's Strategic Framework Working Group to characterize this opportunity.

Energy performance requirements at time of sale

BC Hydro believes that building and residential labelling are a key element in developing the infrastructure to support energy performance requirements at time of sale. BC Hydro is a partner in efforts to progress both building and residential labelling. However, we intend to revisit a pilot project regarding energy performance requirements at time of sale as labelling initiatives are further advanced.

Appendix C: Glossary

2007 BC Energy Plan

A statement of BC Government policy related to provincial energy matters issued by the Ministry of Energy, Mines and Petroleum Resources in February 2007.

Demand Side Management (DSM)

Actions that modify customer demand for electricity, helping defer the need for new energy and capacity supply additions.

Distributed generation

Energy generated where it will be used (through solar panels on a house, for example). Required for creating an integrated, renewable energy system, which is an essential component of net-zero communities.

Electricity conservation

Electricity conservation measures refers to measures that encourage or result in customers using electrical components less. Examples include: reducing the number of hours lights are turned on, reducing the number of hours appliances such as dishwashers and dryers are used (by operating them only when filled to capacity), turning off computers and computer monitors when not being used, using air conditioners less etc.

Electricity efficiency

Electricity efficiency measures refers to measures that result in electricity being used more efficiently. Examples include: replacing inefficient technologies such as incandescent seasonal light-bulbs with energy-efficient LEDs, replacing inefficient electric motors with new high efficiency versions etc.

First Nation

Either an Aboriginal governing body, organized and established by an Aboriginal community, or the Aboriginal community itself.

Kilowatt (kW)

One thousand watts; the commercial unit of measurement of electric power. A kilowatt is the flow of electricity required to light 10 100-watt light bulbs.

Net-zero

A net-zero home, building, industry or community is one that is capable of producing as much energy as it consumes over the year.

Power Smart

BC Hydro's Demand Side Management (DSM) initiative to encourage energy efficiency by its customers. Launched in 1989, Power Smart includes a full range of DSM programs aimed at BC Hydro's residential, commercial and industrial customers.

Rate

The price a BC Hydro residential, commercial or industrial customer pays per kilowatt hour of electricity.

Split incentives

Incentives specifically developed to encourage three different groups – property developers, owners and occupants – with differing interests to participate in BC Hydro programs.

Stakeholders

Individuals, groups or representatives of groups who have an interest in BC Hydro's activities. Municipal governments, environmental organizations and employees are a few examples of BC Hydro's stakeholder groups.

Stepped rate

A rate structure for transmission class customers prescribed by the 2002 BC Energy Plan, that use different price levels to incent efficiency investments so incremental consumption will be priced at incremental cost.

Appendix D: 2008 Projects

The Committee also reviewed the eight projects identified as priorities by Strategic Framework Working Group for the next year:

Project 1 – Creating a Market for Energy Efficiency

a. Key questions:

- i. How do we encourage more private-sector investment in energy efficiency?
- ii. What parameters in the market have to change for this to happen?
- iii. What levers are available to encourage more private-sector investment in energy efficiency?
- iv. Where and under what conditions does sizable private-sector investment in energy efficiency occur in other jurisdictions?

b. Potential scope of work:

- i. Identify barriers to private sector investment in B.C.
- ii. Identify innovative policy options to encourage private-sector investment.
- iii. Prioritize possible policy actions and identify required stakeholder involvement.
- iv. Provide recommendations to BC Hydro (and others) on policy and initiatives.

c. Ongoing initiatives:

- i. Proposal for pilots:
 1. Expedited Building Development permitting.
 2. Local-Improvement Charges.

d. Possible deliverables:

- i. A recommendation as to where efforts should be prioritized in this area.
- ii. A recommendation on initiatives that BC Hydro could spearhead to increase private-sector investment in energy efficiency.

Summary of Discussion about Project 1

- a. When considering the potential scope of this project, it is important to note First Nations treaties and rights and where they fit in.
- b. The risks of investing in energy efficiency are high, and returns are low and slow to be realized.

- c. A market is created when there are scarce goods and the opportunity to earn a return.
- d. This project could be about creating an energy efficiency industry.
- e. Consider setting the cost of energy to account for more than just its monetary price, such as greenhouse gas emissions.
- f. A third party could serve to buffer the investment risk and increase incentive to invest.
- g. The provincial government has a lower tax for green business ventures.
- h. Additions to scope of work could include evaluation metrics and the coordination of various market-shifting incentives.
- i. It is challenging to design pilots for this project.
- j. Changing governments can complicate matters; local, provincial and federal elections are all coming up in the next three years.

Project 2 – Community-Focused Distributed Generation

a. Key questions:

- i. What are the benefits and costs of distributed generation?
- ii. Under what conditions does distributed generation make sense (for BC Hydro, for community)?
- iii. Should distributed generation efforts be carbon neutral?
- iv. What is the connection between distributed generation and energy conservation?
- v. What distributed generation opportunities should BC Hydro pursue?
- vi. What are the key issues that must be resolved before distributed generation can be implemented?
- vii. How can investment in distributed generation be encouraged?

b. Potential scope of work:

- i. Identify conditions for successful distributed generation projects in both near and long-term.
- ii. Identify education and awareness requirements for a distributed generation strategy.
- iii. Identify how BC Hydro could prioritize communities and/or technologies for distributed generation opportunities.

- iv. Provide recommendations to BC Hydro (and others) on distributed generation policy and initiatives.
- c. Ongoing initiatives:**
 - i. BC Hydro Study on Distributed Generation.
 - ii. Smart Metering Initiative Project.
- d. Possible deliverables:**
 - i. A recommendation as to the conditions under which distributed generation should be pursued by BC Hydro.
 - ii. A recommendation as to which technologies and/or communities BC Hydro should prioritize for distributed generation.
 - iii. A list of policy items that need to be addressed for a successful distributed generation strategy.
- e. Building community relationships will be a key to success.
- f. The rate of return on district heating appears attractive, but institutional barriers exist.
- g. This project could help to ease the impacts of having generation displaced from demand.
- h. Microgrid concept: the creation of an integrated neighbourhood system that encompasses generation, heating and cooling, and the capture of waste energy to produce a net-zero community.
- i. The UVIC Irene model integrates renewable energies into a community grid.
- j. Additions to deliverables could include pilot projects, creation of criteria for acceptable DG projects and a portfolio of past and current DG projects.
- k. BC Hydro's Smart Metering Initiative is an enabler of DG.

Summary of discussion about Project 2

- a. Is a unit of distributed generation (DG) energy more valuable?
- b. Many First Nations communities are off the grid and could be candidates for DG pilots.
 - i. The Department of Indian Affairs funds diesel generation for off-grid First Nations communities; that money could fund DG.
 - ii. First Nations have biomass generation options, such as using pine beetle wood or waste products.
 - iii. By partnering with Federal agencies, First Nations can gain better access to research and development.
- c. Independent power producers (IPPs) could be considered DG, but generally DG refers to customers rather than IPPs.
- d. It would be useful to take an inventory of past and existing DG projects to identify best practices and barriers.
 - i. Rather than, or in addition to, launching new pilots, it is important to examine past projects.
 - ii. Many communities are already going DG projects in jurisdictions in Canada and around the world.
 - 1. Holland is a world leader in DG.
 - iii. The Union of B.C. Municipalities (UBCM) has produced a portfolio on environmental generation and climate change.
- a. Key questions:**
 - i. What are new and innovative opportunities for BC Hydro DSM?
 - ii. Are there gaps in BC Hydro's DSM plan?
 - iii. How can BC Hydro motivate our customers to participate?
 - iv. How should individual-level initiatives be adjusted for increased market and/or societal initiatives?
 - v. How can research and development and technology innovation be incorporated into DSM?
- b. Potential scope of work:**
 - i. Review current DSM plan and consultant's review.
 - ii. Identify gaps in DSM plan (customers, technologies and strategies).
 - iii. Identify "best practices" and innovative strategies for DSM.
- c. Ongoing initiatives:**
 - i. BC Hydro DSM Plan.
 - ii. Consultant report analyzing DSM Plan.
 - iii. BC Hydro DSM best practices report.
- d. Possible deliverables:**
 - i. A recommendation on how to improve future program delivery.

Project 3 – Demand-Side Management Planning

- ii. A recommendation on new and innovative programs and strategies.

Summary of discussion about Project 3

- a. This is BC Hydro's typical area of focus.
- b. The EC&E has work underway in this area; a consultant is being sought to review BC Hydro's DSM plan and provide advice back to the EC&E.
- c. DSM has significant cost benefits compared to alternatives.
- d. A culture shift is required to build support of DSM.
 - i. DSM participation peaked in the 1980s and has been declining since.
 - ii. Any shift in culture is slow.
- e. This project could be linked to project 6 or 8.
- f. There are two possible ways to approach this project:
 - i. Address BC Hydro's DSM plan after the consultant report is complete, or
 - ii. Spearhead new DSM initiatives.
- g. What costs are involved in increasing DSM and who will pay for it? How will it affect rates?

Project 4 – Incentives for Developers, Property Owners and Occupants

a. Key questions:

- i. How does the principle-agent problem impact energy saving opportunities?
- ii. What are possible levers to encourage developers and owners to make energy efficiency investments – taxation, property by-laws, permitting?
- iii. At what level of government would these policies be implemented? What are the jurisdictional challenges in making these changes?
- iv. Where and how have the incentive for property owners and occupants been corrected to enable increased energy efficiency investment?
- v. How would these levers be implemented?

b. Potential scope of work:

- i. Description of developer/owner/occupant issue in B.C.
- ii. Review of what other jurisdictions are doing to correct the principle agent issue.

- iii. Identify possible levers to encourage developers and owners to make energy efficiency investments.
- iv. Prioritize areas for BC Hydro action.

c. Ongoing initiatives:

- i. Proposal pilots:
 - 1. Expedited Building Permitting.
 - 2. Local-Improvement Charges.

d. Possible deliverables:

- i. Identification of a framework to discuss stakeholders, interests and issues in the context of the developer/owner/occupant issue.
- ii. A recommendation on priorities for policies and actions to correct "split incentive."
- iii. A recommendation on how BC Hydro can work with partners to implement these priorities.

Summary of discussion about Project 4

- a. In the commercial sector, building owners do not typically occupy their own buildings. Tenants pay the owner based on the square footage of their space, and pay all other costs, including energy.
 - i. Owners are not motivated to provide capital for efficiency upgrades as they will not be able to recover the investment through energy cost savings.
 - ii. It is important to identify ways to unite the interests of owners and tenants.
- b. In the residential sector, developers are motivated only by sales. There is no incentive to be energy efficient unless the market demands it.
- c. For landlords, there is a cap on rental rate increases that makes involvement in green programs more costly.
 - i. Some property owners want to make efficiency upgrades but cannot afford to because of the rent cap.
- d. It would be useful to segment the three property sectors (residential, commercial and industrial) and examine them separately.
- e. Consider the social impacts of the residential sector, which includes low-income families.
- f. In a time of housing crisis, it is difficult to decide between more, less efficient housing

units, or fewer, more efficient units for the same cost?

Project 5 – Risk Management for Business and Industry

a. Key questions:

- i. How can industry risk be managed to increase energy saving opportunities?
- ii. Has risk management strategy been used elsewhere? Other jurisdictions? Other sectors?
- iii. What are the alternative mechanisms that could address business risk?
- iv. What would an insurance approach look like?
 1. Benefits
 2. Challenges
 3. Implementation

b. Potential scope of work:

- i. Identify jurisdictions or sectors where a successful risk management strategy has been implemented.
- ii. Identify alternatives for managing customer risk.
- iii. Develop how an “insurance approach” may work .
- iv. Identify benefits, costs and challenges to managing customer risk.

c. Ongoing initiatives:

- i. Unknown

d. Possible deliverables:

- i. A recommendation to BC Hydro on an approach for managing industrial customer risk to stimulate customer investment in energy efficiency.

Summary of discussion about Project 5

- a. Efficiency investments have high potential but require significant capital.
- b. The insurance approach would aggregate investment risk across a larger pool of businesses.
- c. Both risk management and attracting capital are barriers for business and industry.
- d. Investors face the risk of either the investment or the business failing, or both.

- e. An off balance sheet financing approach would reserve transferring full ownership of efficiency installations to the buyer until the lease is paid.

Project 6 – Market Project Enablers

a. Key questions:

- i. What are the needs of communities with respect to energy and conservation?
- ii. How to engage communities in energy conservation and efficiency strategies?
- iii. How does energy conservation and efficiency integrate with a community's overall sustainability strategy?
- iv. How to coordinate with governments on legislative and regulatory opportunities?
- v. How to coordinate with other complementary initiatives?

b. Potential scope of work:

- i. Examine how other jurisdictions engage communities.
- ii. Identify effective approaches in engaging communities.
- iii. Identify key partners and complementary initiatives.
- iv. Develop a community engagement strategy.

c. Ongoing initiatives:

- i. MEMPR Coordination Paper and working groups.
- ii. Climate Change Action Team.

d. Possible deliverables:

- i. A recommendation on a community engagement strategy.
- ii. A recommendation on partnership strategy.
- iii. A recommendation on how BC Hydro can best influence legislation.

Summary of discussion about Project 6

- a. While government has a role in all projects, this project could address government specifically.
- b. There is significant capacity within municipalities to take on initiatives and projects, but also barriers, including other levels of government.

- c. Remember that First Nations relate to governments as a government.
 - i. First Nations' capacity to engage may be restricted by treaty negotiations.
 - d. This project emphasizes community engagement and the need for BC Hydro to enrol partners; the scope could be expanded to include all allies and stakeholders.
 - e. The role of the private sector needs to be addressed.
 - i. All other projects address the private sector, and the government would be expected to engage the private sector through this project.
 - f. "Market" refers to the marketplace in which DSM decisions are made.
 - g. Governments will need to engage communities to be successful in this project, which can include the private sector.
 - h. Extensive work is underway at various levels of government; it would be useful to inventory current initiatives and identify gaps and opportunities to coordinate.
 - i. This project needs to define the role of each level of government and the role of BC Hydro, and define who pays for and who benefits from initiatives.
 - j. Other allies and stakeholders are addressed in other projects, including 1, 4 and 5.
- ii. Identify further areas for BC Hydro involvement in movement to net-zero homes and buildings.
 - iii. Identify financial mechanisms and policy levers for net-zero; what are other jurisdictions doing?
- c. Ongoing initiatives:**
- i. iCMHC Net-Zero Energy Healthy Housing Initiative (building a number of demonstration homes).
 - ii. BC Hydro Conservation Innovation group (monitoring the technology side).
 - iii. Distributed Generation Study.
 - iv. Smart Metering Initiative.
- d. Possible deliverables:**
- i. A recommendation to BC Hydro on a strategy for the net-zero building opportunity in the near-, medium- and long-term.

Summary of discussion about Project 7

- a. The province is working with BC Hydro to launch a net-zero program.
- b. Net-zero can apply to everything from buildings to whole communities.
- c. A long-term vision could be to move beyond net-zero to "net positive."
- d. Legislative initiatives regarding net-zero exist at the federal and provincial levels.
- e. Pit houses are a First Nations model for energy efficient housing.

Project 7 – Moving to Net-Zero (Net-Zero Homes, Buildings and Industries)

a. Key questions:

- i. What are the barriers to net-zero buildings?
- ii. What are the financial mechanisms and policies required for a movement to net-zero in the near-term? In the long-term?
- iii. What is the capacity in trades required for a movement to net-zero?
- iv. How will net-zero buildings integrate with BC Hydro?
- v. What are the conditions (technical, economic and regulatory) for net-zero development in near-term?
- vi. Are there intermediate steps in moving to net-zero that should be pursued?

b. Potential scope of work:

- i. Identify near- and long-term barriers and opportunities for net-zero homes and buildings.

Project 8 – Societal-Level Work

a. Key questions:

- i. What are the levers in which to shift societal norms and patterns?
- ii. How can BC Hydro justify activities at the societal level?
- iii. What could B.C. look like if societal norms and patterns changed to increase energy efficiency and conservation?
- iv. What are activities that BC Hydro could undertake to influence a change in societal patterns and norms?

b. Potential scope of work:

- i. Examine case studies of societal level change.

- ii. Identify opportunities and priorities for work at the societal level.
 - iii. Identify areas for BC Hydro involvement at societal level.
- c. Ongoing initiatives:**
- i. Strategic Framework Working Group Societal Level Scoping paper.
- d. Possible deliverables:**
- i. Provide guidance and recommendations for a societal scoping paper.
 - ii. Prioritize and engage BC Hydro and partners in societal level initiatives.

Summary of discussion about Project 8

- a. A key element of this project is improving the visibility of electricity in B.C.
- b. Societal level change includes impacting social norms and standards as well as community planning: the relationship between where people live, work, shop and recreate.
- c. This is beyond cost-effective conservation and therefore it would be inappropriate for BC Hydro to spend ratepayers' money this way.
 - i. Social change can be cost-effective in the long term.
 - ii. Some consumers are willing to pay more for socially and/or environmentally conscious products.
- d. This project should be led by someone other than BC Hydro, possibly an NGO.
- e. This project is essentially social engineering and therefore sensitive in nature. It is important to keep the process transparent.
- f. Existing studies that may support this project:
 - i. GVRD's Liveable Region Program (25 years ago)
 - ii. The City of Vancouver's City Plan (15 years ago)
- g. Many groups in the planning sector are already doing this work.

Final Decisions

The Committee agreed to present the Project Concepts to BC Hydro, with the following items noted:

- a. Project 1: Creating a Market for Energy Efficiency**
 - i. This is a higher priority project, though not all objectives need be accomplished immediately.
 - ii. This project may require a BC Hydro project team.
 - iii. Does BC Hydro agree that changing the market is worthwhile?
- b. Project 2 (includes 7): Community Focused Distributed Generation and Moving to Net-Zero**
 - i. BC Hydro has a distributed generation project team with work underway; the Committee would like more information.
- c. Project 3: Demand-Side Management Planning**
 - i. The Committee is waiting for the consultant's review of BC Hydro's DSM Plan before taking further action.
- d. Project 4: Incentives for Developers, Property Owners and Occupants**
 - i. A working group will be formed to provide detailed scoping of this project and define the issues.
- e. Project 5: Risk Management for Business and Industry**
 - i. The issue of this project is risk as a barrier to investments in DSM labour, technology and infrastructure.
 - ii. The industrial sector is a high priority for this project.
 - iii. Consider existing pilots and external groups.
- f. Project 6: Market Project Enablers**
 - i. Committee member Andrew Pape-Salmon will draft a revised version of this project.
- g. Project 8: Societal Level Work**
 - i. This project is an important conceptual piece to be further developed in the future.
 - ii. BC Hydro has already indicated its support of societal-level work by adopting the Strategic Framework.