Info Session Date and Location
March 2, 2005
Best Western - Ballroom C
1250 Rogers Way, Kamloops, B.C.

Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Interest/Organization</th>
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<tr>
<td>Tony Brumell</td>
<td>Interested Citizen</td>
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<td>George Poncelet</td>
<td>Interested Citizen</td>
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<td>Sarge Strecheniuk</td>
<td>Residential Consumer</td>
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<td>Alf Janke</td>
<td>Interested Citizen</td>
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<td>Grant Fraser</td>
<td>Green Party</td>
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<td>Colin Webster</td>
<td>Interested Citizen</td>
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<td>Jason Hewlett</td>
<td>Kamloops Daily News</td>
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BC Hydro/IEP Representatives

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<tr>
<th>Name</th>
<th>Organization</th>
<th>Responsibility</th>
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<tr>
<td>David Ince</td>
<td>BC Hydro, Energy Planning</td>
<td>IEP Presenter/P3M</td>
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<tr>
<td>Mary Algar</td>
<td>BC Hydro, Community Relations</td>
<td>Host/Facilitator/CR</td>
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<tr>
<td>Anne Cochran</td>
<td>External Consultant</td>
<td>Workshop Facilitator - Mar 3</td>
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<tr>
<td>Amanda Diedrick</td>
<td>External Consultant</td>
<td>Note Taker</td>
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1. Introduction/Overview
Six members of the public and one member of the media attended the information session.

Mary Algar welcomed the group, thanked them for coming and introduced the BC Hydro representatives in the room. She explained that the purpose of this meeting was to obtain feedback from stakeholders about integrated electricity planning.

Mary provided a brief outline of the various engagement streams in the 2005 Integrated Electricity Planning (IEP) process. She also provided the group with an overview of the evening’s agenda and indicated there would be a more in-depth workshop the following day. She invited attendees to feel free to see her if they had any non-IEP-related questions.
2. IEP Presentation
David Ince gave a presentation, which explained the following:

- What an IEP is and why it is needed.
- How an IEP is produced.
- What an energy portfolio is.
- How the action plan resulting from an IEP is used.
- The two-year cycle for regulatory requirements.
- 2004 IEP outcomes, highlights and feedback.
- How 2005 IEP feedback will be used.

3. Group Exercises
The group was asked to discuss and provide feedback on two questions. Their input is provided below:

Question #1:
In developing future electricity resources, what are the most important factors to you?

- I think cutting demand should be important. Power Smart has worked well in some industries but not in others; it may work better for residential customers. Of course, I recognize that this is not just a BC Hydro problem. The government has to take some leadership as well.
- The availability of the Columbia River Treaty downstream benefits to B.C. residents to meet future demands (given that the facilities already exist and there are no additional incremental impacts).
- A significant reduction in the use of fossil fuels and non-renewable fuels.
- The ability of future energy sources to also provide waste solutions. Biomass projects could include farm waste, wood waste and pellets.
- New sources should provide a net environmental improvement: consider the air quality effects of any future development.
- In developing future electricity resources, we need to consider the incremental impact of many smaller projects as opposed to the impact of one large project. Instead of damaging ecosystems province-wide, why not consolidate the impacts into a few large projects?
- Along with financial costs, BC Hydro needs to consider other costs associated with the resource options, for example, environmental, social, etc. BC Hydro needs to incorporate a full cost accounting structure.
- Consider standards for independent power producers (IPPs). BC Hydro should hold IPPs to higher standards, and should ultimately be responsible for the emissions of the IPPs.
• Reduce greenhouse gases (GHG) by 30 per cent. The use of existing thermal plants should be considered as an emergency supply only.

• Cost is an important factor - many alternatives may be too expensive for customers.

• Having a reliable source of electricity is important. If you rely on too many independent suppliers, reliability may be jeopardized. We have huge capacity for energy generation in B.C. and there should be no excuse for brownouts. BC Hydro should produce power on its own as this ensures better reliability.

• Develop other hydro sites. This is a viable solution and should be further developed. It’s the reason we’ve enjoyed reliable, affordable electricity. Large-scale hydro is a better choice.

• Don’t develop hydro facilities on new rivers because this has a negative impact on the environment. Build more hydro dams on rivers with existing hydroelectric systems.

• Consider air quality, and use resource options that are better for the air, such as hydro, wind, etc.

• Natural gas represents 96 per cent of new energy generation developed in the overall region (Western Electricity Coordination Committee - WECC) in the last five years. This is not good because of the financial impacts and the fact that natural gas is non-renewable. Instead, we should use more “clean”, renewable resources.

• Dependability of electricity supply is a big issue.

• No nuclear power: the group was unanimous in this sentiment.

Question #2:
Which of these factors would you be willing to pay (or pay more) for?

• Green power. The group defined this as energy sources that provide zero emissions, or a net environmental improvement over other alternatives.

• I would pay more for non-fossil-based fuels, for example, gas, coal, and oil. I would pay more for renewable resources. We have to: it’s a matter of survival.

• More aggressive conservation programs, for example, Power Smart. Any money saved should be folded back into the conservation program.

• Resources that have fewer impacts on air quality or produce less GHGs.

• Reliability. Half the group agreed they would pay more, the other half did not. (Note: The folks that would not pay more for reliability commented that more reliability makes people rely more heavily on electricity.)

• No nuclear energy. All but one of the group members indicated they would pay more for not having nuclear energy.
4. Summary of Meeting/Next Steps
Mary thanked the group for their input and asked whether anyone would be interested in attending the workshop on the following day. She explained that the feedback from the information session would be recorded and posted on the 2005 IEP website, and that it would be included in the final IEP. She asked for any further questions (see below). The meeting wrapped up at 9:15 p.m.

4.1 Questions and Answers
The following questions were asked throughout the evening and have been grouped together for ease of reading. Answers provided by BC Hydro team members are indicated in italics.

Will the public be represented at tomorrow’s regional workshop?
Mary indicated that although tonight’s session was the main way the public could provide input, anyone from the information session that was interested in attending the workshop could do so.

Note: Mr. Tony Brumell accepted the invitation to attend the next day’s regional workshop.

What’s the difference between biomass generation and cogeneration?
They’re generally similar in terms of technology. In the end, both generate heat and electricity. A biomass operation typically burns waste organic material to create steam or hot gases to drive a generator set. Cogeneration involves the burning of combustible materials (that could be biomass) to create steam or hot gases to drive a generator set. In cogeneration, the heat/steam is also used for other purposes such as heating buildings.

Is biomass just for energy production, or is there some other purpose for the burning?
It’s used for both waste reduction and energy production.

Is biomass predominantly wood waste? And is cogeneration other products?
Yes, biomass is predominantly wood waste, although it could also be farm waste, manure, garbage, etc.

Does the BC Utilities Commission (BCUC) oversee Independent Power Producers (IPPs) as well as BC Hydro? What happens if an IPP decides to increase prices? And how do we know we’re not being charged inflated prices by IPPs? How are IPPs regulated from an environmental perspective?
The BCUC has the right to review all of BC Hydro’s books, including its contracts with IPPs. They can disallow any contract or expenditure that is not prudent. BC Hydro provides IPPs with long-term, fixed price contracts, generally between 20 and 25 years. The process by which IPPs are selected is competitive, which also helps drive prices down. In terms of environmental regulation, IPPs are required to meet all relevant provincial requirements and environmental laws.

Why would you sign such long-term contracts? Why would an IPP sign such a long-term contract?
These projects are highly capital intensive, and as a result, these companies won’t sign contracts of less than 10 years. Power producers want to supply power to BC Hydro, and they need a long-term contract to recoup costs.
Isn’t the fact that Mr. Miller is a BCUC commission panellist and also a Director on the Board of BC Gas a conflict of interest?
The issue pertains to the recent Vancouver Island Call for Tenders BCUC hearings. The BCUC initiated the hearings with 3 Commissioners, one of which (Birch) was the acting President of a major Canadian-based pipeline company. To avoid the perception of bias, Commissioner Birch stepped down from the proceedings and the two remaining Commissioners (Hobbs and Boychuck) heard the process and made the final decision to approve the Duke Point project.

In addition to the BCUC, isn’t there also an international agency dictating power policy? I don’t know of any. You may be thinking of the U.S. Federal Energy Regulatory Commission (FERC). The only way they impact BC Hydro’s operations is by controlling our ability to trade with the United States. BC Hydro holds a FERC Power Marketing Authorization and we have no problems complying with that.

Instead of the Duke Point project, why couldn’t a new power line be run to Vancouver Island from elsewhere? BCUC required that a Vancouver Island generating resource be used to supply power to the Island.

I’m concerned about having all our eggs in one basket when it comes to the number of natural gas facilities. Won’t natural gas supplies run out soon? And won’t the cost become greater as this supply diminishes? We’ve done a lot of research into gas supply and price forecasting throughout North America. There is quite a large supply left, although the price may rise as the supply is reduced. We have reflected this projected increase in the energy supply portfolios we’re looking at. We also need to keep in mind that over time, we get more efficient at extracting natural gas, and this efficiency helps mitigate rising costs due to scarcity.

Do the people in the area support the Duke Point Power (DPP) project? The feedback we have received indicates a wide range of opinions with respect to support for the Vancouver Island DPP plant. Some support the project, some do not.

Is the Duke Point project going to require a new pipeline, either underwater or on land? No, Terasen is going to expand the existing pipeline for us. There’s enough capacity underwater; it’s the on land component that needs expansions.

Is there any potential for coal gasification? Coal gasification is a promising development, as is coal bed methane, in terms of increasing gas supply to the continent. I think there will be more of these resources used in the future.

You’re talking about large-scale hydro developments as a potential future energy source, but the government has said BC Hydro can’t build new facilities. Who would build these? BC Hydro can develop Resource Smart projects on a case-by-case basis. Resource Smart projects are cost-effective improvements and expansions to our existing facilities. In the case of a project like Site C, which is on an existing hydroelectric river system, BC Hydro would likely build the project.
Why doesn’t BC Hydro pay the same to purchase micro hydro and wind as it does for natural gas and other power sources?
Prices that BC Hydro is willing to pay for power are partially based on evaluation adders or subtractors that are included when BC Hydro issues its competitive calls for power. When we issue a call, we often identify attributes (such as low emissions) we’re really looking for. If suppliers provide proposals that include those attributes, we’re willing to pay more. Some of these attributes include dependability, firmness, the ability to be turned on or off as needed, etc.

Has a contract been awarded for the Duke Point Power plant on Vancouver Island? How does the cost of power from that facility compare to Hydro’s facilities? What is BC Hydro’s cost?
It’s more expensive than BC Hydro’s rates, although you need to remember that BC Hydro’s rates are based on large-scale largely depreciated assets. BC Hydro’s cost of running its current generation assets is very low: $25.40 per megawatt hour. No new supply, either imports or from domestic IPPs is likely to be this low. We had a competitive situation on Vancouver Island that started with 22 potential bids. The DPP one was chosen because it was the most cost-effective supply for BC Hydro’s needs.

Why didn’t the wind project proceed on Vancouver Island?
A number of reasons, dependability being one of them.

What do you mean by “mitigated?” How do you mitigate emissions at Duke Point?
Why not just avoid them in the first place?
It is up to Duke Point Power to manage the emissions (pay the cost and administer the compliance) of this development.

You mentioned that in the year 2000/01, BC Hydro made a profit of $1.6 billion, and that those profits were paid to the government in a dividend. Doesn’t that conflict with your earlier statement that profits go towards lowering costs for consumers?
BC Hydro is owned by the provincial government and they are the one and only shareholder. I can tell you that our goal is to keep rates low and dividends to the province stable.

Does Hydro pay a dividend to the provincial government every year?
Every year that I am aware of.

Do you write down the debt every year as well?
Policies pertaining to how much debt BC Hydro carries are maintained by the Treasury Board of the province. They try to maintain roughly the current debt-equity balance.

How much debt does BC Hydro carry?
Seven billion dollars.

Is BC Hydro a net importer? Is the export power you’re selling being sold at higher rates than the power you’re buying?
BC Hydro has been a net importer for the past four years. Yes, the power is being sold at higher rates than our purchase price.
Why can’t you store wind power like you can other forms of energy?
You can, but there are storage constraints on the BC Hydro system. Demand for power is winter peaking, but most of BC Hydro’s supply comes in as water inflows during the freshet period, between April and July. There’s ample supply available during the freshet period, but only so much storage capacity. That’s also when much of the wind power is available. Intermittent or unpredictable resources that BC Hydro takes into its system could reduce its overall system flexibility. The result is a cost in terms of reduced trade opportunities and increased supply costs to domestic customers.

Alberta uses wind energy with their coal supplies. Can we build in different locations in BC to diversify the supply?
Wind generators feature a relatively low capacity factor. This is the ratio of average power production divided by peak power production. All things being equal, a higher ratio is better. Pincher Creek in Alberta is a world-class wind site, and its capacity factor is approximately 35 per cent. There are some diversification benefits to developing wind in different locations in the grid. A 1980s Alberta study was referred to in which this factor can be increased to approximately 40 per cent by interconnecting wind production in different locations in the province. Typically, coal-fired generation in isolation has a capacity factor in excess of 80%.

Does BC Transmission Corporation (BCTC) subsidize IPPs?
I am not aware of specific policies that would create this situation. BCTC transmission service policies are subject to approval by the BCUC, and if there was subsidization, these costs and policies could be disallowed.

Are you subsidizing Weyerhaeuser? Did BC Hydro do an analysis of the impact of trucking biomass to Weyerhaeuser? Comment that BC Hydro should demand the best available control technology from its suppliers.
The question refers to the Power Smart incentive provided to Weyerhaeuser in Kamloops. I am not fully aware of the incentives provided to Weyerhaeuser in this particular case. However, new electricity supply does cost more than BC Hydro’s existing supply. It is advantageous to BC Hydro and to the province as a whole to provide incentives to industrial customers, which reduce consumption and therefore reduce our procurement costs.

We’re coming up to Kyoto. With the Duke Point project coming on stream, how is BC Hydro going to cut GHGs so that there is no net environmental impact?
We’ve got a call for power coming up and we’ll certainly encourage GHG reduction as part of the call. Having said that, we recognize we have to defer to the province on overall policies related to GHGs. They are taking the lead and setting the policy on this matter.

What are some of your most challenging areas?
Abbotsford, Sumas II. They’re concerned about air quality issues.

Where are your areas of challenge in terms of growth and demand?
Vancouver Island, Kamloops, and the Okanagan region.

Can we get more power out of Columbia River entitlement?
It’s owned by the province and they have contracted Powerex to market it.
What is non-discriminator access to the transmission system?
Non-discriminatory transmission access gives independent generators or customers the ability to access the transmission system on the same terms and at the same rates as incumbent utilities and generators. This gives B.C. IPPs the ability to sell power within B.C. or export outside of the province without BC Hydro interaction. It allows domestic customers to import power from outside the province or contract with BC-based IPPs for their power requirements.

Does BC Hydro have to provide access to the grid to any IPP? Is the BCTC subsidizing producers who want to put power on the grid?
BCTC has to provide non-discriminatory access to all power producers. No, they are not subsidizing IPPs as far as I know. The BCUC regulates policies regarding transmission access and costs.

4.2 General Participants’ Comments
Along with the questions and answers outlined above, the Kamloops information session attendees offered the following general comments.

- Provincial building code has not been updated to encourage the use of Power Smart technology or to make it mandatory.
- It’s not fair to consumers that profits get paid out to the government in dividends: we’re not getting the money back.
- I’m angry that people are building dumps and then putting water in them to speed up the creation of methane. This is not good for the environment.
- It’s one thing to burn existing waste through biomass, but I’m concerned people will start ”creating” waste or fuel, just to be sure they can continue producing energy.
- You really have to stop charging a connection fee because it discourages conservation. For example, if your monthly connection fee is $25 and your monthly power bill is $25, only the power bill part is reduced if you decrease your consumption. This means that even if you cut consumption by 50 per cent, only a 25 per cent reduction is reflected in your bill. If people paid exactly for what was used, and could see a direct savings, I believe they would conserve more energy.
- I’m concerned about the resource calls because you differentiate between small and large hydro. With large hydro, one section of a large river is destroyed for a period of time but with small hydro, lots of rivers and streams are impacted. Putting in one major plant is worth a number of small plants. Small hydro may seem greener, but I believe it’s part of a huge incremental privatization of BC Hydro. Small hydro has ecological impacts as well - it isn’t necessarily better than large hydro.
- I believe if you weren’t paying out a dividend to the government every year, BC Hydro would be debt-free.
- I’m interested in biomass, and I have two comments about wood-fired plants. First, you have to consider the distance energy has to travel. If you transport it more than 100km in any direction, you end up using more energy than you’re producing. Second, if you’re committed to protecting the environment, you need to consider particulates (that result
from combustion). You say that IPPs are operating under provincial standards, but I don’t believe these standards go far enough when it comes to environment. I think BC Hydro needs to demand higher air quality standards if you’re going to use biomass as an energy source.

- I think that IPPs need to be held to high standards. For example, when Weyerhaeuser put in their new generator, they said they were going to offset 28 megawatts. At 30 megawatts, they would have required an environmental review. If they’re going to come back later and offer an additional 9 or 10 MW, that’s against the spirit of the law. BC Hydro needs to hold IPPs to a high standard and, if their cumulative megawatts exceed 30, they need to be subject to environmental review. We also have a concern regarding the lack of public consultation for the Weyerhaeuser agreement.

- Why can’t BC Hydro quit burning things? Why do so many energy sources rely on burning products such as coal, gas or wood? It’s not helping the environment at all. In this area, for example, we have terrible air quality issues already: we don’t need the pollution.

- I’m concerned about IPPS. If they control the supply, they’ll increase costs. I know you say you have contracts with them, but how will you hold them to their contracts? There’s no contract complex enough to do what a public utility can do in the first place.

- BC Hydro is a wonderful organization and the government is screwing it up.

5. Summary of Meeting and Next Steps

- Mary Algar agreed to copy the large Green Electricity Resources of B.C. map and send it to George and Colin. Done.

- As George Poncelet does not have access to email or the Internet, he would like us to mail the meeting notes to him. Done.

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