

Pages 1 through 24 redacted for the following reasons:

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s.13, s.16, s.17

**MINISTRY OF ENERGY AND MINES**

**BRIEFING NOTE FOR DECISION**

**I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines, and  
Honourable Kevin Falcon, Minister of Finance

**II ISSUE:** BC Hydro Rates and Government Review

**III BACKGROUND:**

On March 1, 2011, BC Hydro filed a 3-year rate application with the BC Utilities Commission (BCUC) seeking increases of 9.73% effective April 1 in each of 2011, 2012 and 2013. The cumulative impact of this increase is 32% over 3 years. Combined with a 7.29% approved increase in 2010/11 and an anticipated 7% in 2014/15, the impact is 50% over 5 years.

On March 14 the BCUC approved the first 9.73% increase effective April 1, 2011 on an interim basis. It is normal practice to award interim increases before a rate hearing, as these are subject to refund to customers, with interest, if the BCUC determines the final increase to be lower than BC Hydro applied for.

The original schedule for the BCUC's review of BC Hydro's rate application was:

Date	Activity
April – June	BCUC staff and intervenors representing customer, environmental and power producer groups file information requests (IRs) on BC Hydro's 1,500-page application, and BC Hydro responds
Mid-July	BC Hydro files an evidentiary update (essentially a revised application) that includes actual 2010/11 results, and updated forecasts of water inflows, electricity and gas market prices, interest rates, etc., and any changes from the IR process
Aug. – Sept.	Further BCUC and intervenor information requests and BC Hydro responses
Oct. – Nov.	Oral public hearing
Dec. – Jan./12	BCUC decision

On March 24, 2011, media reporting of the government's concern over BC Hydro's proposed rate increases in the context of families first priorities intensified, with speculation that the rate increase would be below the reported 50% over 5 years.

The BCUC held a Procedural Conference on March 25, 2010, during which the potential of a government review and the level of interim rates were discussed. BC Hydro proposed a two-week adjournment in order to get more information on the scope, mechanism and timing of a government review. Intervenors representing customer groups argued that the interim rate increase should be reduced to suspended.

On March 28, 2011, the BCUC suspended the interim rate increase pending submissions from BC Hydro on the government review and interim rates by April 1, reply submissions from intervenors due April 6, and the resumption of the Procedural Conference on April 8. The BCUC Panel noted that it was not convinced that the interim increase was based on the best information available, but that interim rates should be put into effect in a timely fashion to avoid an additional burden on ratepayers at a later date.

#### IV DISCUSSION:

The BCUC reviews BC Hydro's rate applications in an open public process. Detailed examination of costs and challenging BC Hydro on key drivers, including operating costs and capital spending, by both the BCUC and intervenors is part of the process. This typically leads to some changes in the final rates, but the amount is uncertain.

While some intervenors may raise concerns about the impact of government's statutory and regulatory framework on rates (e.g., return on equity, dividends, self-sufficiency), the BCUC must make its decisions within that framework. The BCUC must also consider and be guided by the energy objectives set out in the *Clean Energy Act*.

As the sole shareholder of BC Hydro, it is fully within the Province's rights to undertake a review of BC Hydro's operations, cost drivers and policy environment. s.13, s.16, s.17

s.13, s.16, s.17

#### V OPTIONS:

s.13, s.16, s.17

Page 27 redacted for the following reason:

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s.13, s.16, s.17

**RECOMMENDATION:**

s.13, s.16, s.17

**DRAFTED BY:**  
Les MacLaren, ADM  
250-052-0204

**APPROVED BY:**  
Steve Carr, DM



March 31, 2011

BY FAX (604-775-1688)

Catalyst Paper Corporation  
2nd Floor, 3600 Lysander Lane  
Richmond, British Columbia  
Canada V7B 1C3

Tel: 604 247 4400  
Fax: 604 247 0512

The Honourable Christy Clark  
Premier of British Columbia  
Suite 740 — 999 Canada Place  
Vancouver, BC V6C 3E1

Dear Premier Clark:

I wanted to thank you and Minister Coleman for your swift and timely review of BC Hydro's activities, particularly BC Hydro's Revenue Requirement Application (RRA) for F2012 to F2014.

BC Hydro's proposed series of rate hikes was a concern for individual families in British Columbia and for BC businesses as well. Catalyst is BC Hydro's largest customer, representing approximately six per cent of the utility's domestic load, so the RRA is obviously of great importance to our future competitiveness and to the people and communities that are a part of our success.

Again, I want to acknowledge your quick and responsible action in reviewing BC Hydro's operations and plans.

Sincerely,

CATALYST PAPER CORPORATION

Kevin J. Clarke  
President and Chief Executive Officer

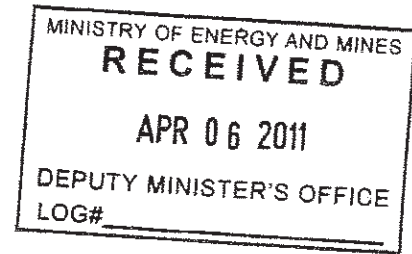
KJC/ee  
cc:

Hon. Rich Coleman  
Minister of Energy and Mines (Fax: 250-356-2965)

*Given Work:  
I look forward to  
the opportunity to meet w/  
person w the new  
plan!  
KJC*

Att.: Hon. Christy Clark  
Premier of British Columbia

Cc: Hon. Rich Coleman  
Minister of Energy and Mines



Cathy Ecbutt  
Executive Assistant to the  
President & C.E.O.  
Catalyst Paper Corporation  
2nd Floor, 3600 Lyxander Lane  
Richmond, BC V7B 1C9  
Direct Tel. (604) 247-4417

MINISTER OF ENERGY	
REFERRAL NUMBER:	58415
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RECEIVED	APR 1 - 2011
REMARKS:	

Catalyst



March 31, 2011

BY FAX (250-356-2965)

Catalyst Paper Corporation  
3rd Floor, 3600 Highway 104  
Richmond, British Columbia  
Canada V7B 1C3

Tel: (604) 271-0000  
Fax: (604) 271-0512

The Honourable Rich Coleman, M.L.A.  
Minister of Energy and Mines  
P.O. Box 9060  
Sta Prov Govt  
Victoria, BC V8W 9E2

Dear Minister Coleman:

I want to congratulate you and wish you every success as B.C.'s Minister of Energy and Mines. I am encouraged by the new thinking that you bring to the Ministry, and would like to meet with you to discuss your review of B.C. Hydro. I have written to Premier Clark on this and other matters and will be writing to Deputy Minister Carr for the same purpose.

Catalyst is B.C. Hydro's largest customer.

At some 3,000 GWh annually, we represent approximately six per cent of the utility's entire provincial load. We are a pioneer in waste conversion, turning one million metric tonnes of biomass into usable, green energy each year, and our manufacturing processes have made us a global leader in carbon reduction. We think our opinions on B.C. Hydro's policies and practices are worthy of your consideration.

Catalyst directly employs 1,500 people in rural and urban B.C., and indirectly supports a further 5,400 additional jobs across B.C., so families and communities are a big part of our success. Our employees and their communities would welcome a visit by you to one of our manufacturing operations in Powell River, Port Alberni, or North Cowichan. Perhaps this is something we could discuss at our meeting.

In 2010, Catalyst spent more than \$2 billion in British Columbia, double that of the B.C. film industry. We are a recognized leader in carbon reduction. Our Port Alberni mill supplies manufactured carbon-neutral paper for *Rolling Stone*, the first mass-market magazine to back climate change with a paper choice that supports global carbon-reduction efforts. Exports from our mills to the U.S. and Asia account for 88 per cent of our sales volume. Catalyst's products have gained market preference in the U.S., India, China, South America, and the Middle East.

I am encouraged by the new approaches that you bring with you. In fact, before my move to B.C., I called New York State home. I worked with elected and appointed officials from the State Assembly, the U.S. Congress, and local and regional governments to make New York State an investment juggernaut. We should be making the same kind of effort in B.C. As I said in my letter to the Premier, the B.C. government's commitments to a new approach in government make this the time for B.C. companies to step forward with new approaches and Catalyst is ready to help. I have asked the Premier to consider the following initiatives, and my offer to assist in making them a reality:



Att.: Hon. Rich Coleman, MLA

Minister of Energy and Mines

Carby Ebbutt

Executive Assistant to the

President & C.E.O.

Catalyst Paper Corporation

2nd Floor, 3600 Lyonsdale Lane

Richmond, BC V7D 1C3

Direct Tel. (604) 247-4417

<b>MINISTER OF ENERGY</b>			
REFERRAL NUMBER:	58415		
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DRAFT REPLY <input checked="" type="checkbox"/>	INFO <input type="checkbox"/>	FILE <input checked="" type="checkbox"/>	TOSS <input type="checkbox"/>
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REMARKS:			

MINISTRY OF ENERGY AND MINES
<b>RECEIVED</b>
APR 06 2011
DEPUTY MINISTER'S OFFICE
LOG#

*A team of 'closers' to seal the deal with potential investors* — Once your government identifies a company serious about investing in British Columbia, I propose that a group of B.C. CEO volunteers, through use of TelePresence or face-to-face contact, talk with the company about why we are here, and why they should be here too. These 'closers' would provide potential investing companies with the ability to see the real benefits in investing in B.C.

*A B.C. award program that recognizes 'Can-Do' communities* — If your government developed an award for B.C. communities that work with their businesses and industries to overcome challenges and develop community solutions, it will do much to build pride within B.C. As important, it would help guide investors to consider their opportunities in establishing operations in B.C., and in these communities.

*A "Paper, Pen, and Postage" literacy program* — This Catalyst school-based initiative is looking to bring together the school system, Canada Post, along with associated print industry merchants, to facilitate school children discovering the impact a hand-written letter delivers, even in a pixel age. The benefits of this program to children and families, and its link to community literacy will enhance community competitiveness in attracting investment. I would welcome your participation as we bring Paper, Pen, and Postage to life.

*A First Nation cultural, literacy and economic initiative* — We are working with Tla'Amin First Nation (Sliammon) to commit their oral history to paper and publish it before it is lost to the passage of people and time, and is thus lost to future generations, or to the chroniclers of British Columbia. This could be the start of a micro-publishing business venture for the Sliammon, and your government's support to add organizational capacity would help this cultural, literacy, and economic venture succeed, and serve as a model for other First Nations.

*A recognition of local government innovation to maintain and attract investment* — Action by your government to recognize municipal leadership in forging partnerships that benefit the community and the province would be an inspiration to all B.C. communities, especially those with municipal tax challenges. This would be a valuable support to the Premier's pledge to look at the competition between commercial, industrial and residential taxation, and finding ways to make sure the taxpayer is well-served and B.C.'s families have the services they need to flourish.

Later this year, we are going to bring our operation to Victoria, to showcase the people and communities that help shape and that are touched by our B.C. operations. We will be extending a formal invitation to you and your colleagues to join in the celebration of a B.C.-based company with local, provincial, and international impacts.

I look forward to meeting with you. In the interim, if your office would like an immediate briefing on our operations or any of the initiatives outlined above that we presented to the Premier, please contact me, or Lyn Brown, Vice President Corporate Relations & Social Responsibility at (604) 247-4713.

Again, my congratulations on your selection to this very important Executive Council position and my best wishes for your success.

Sincerely,

CATALYST PAPER CORPORATION

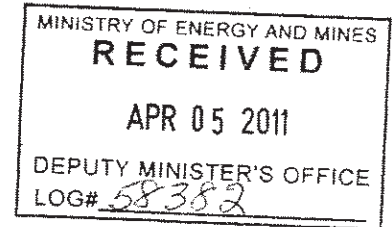
Kevin J. Clarke  
President and Chief Executive Officer

KJC/ccs

Firth, Janet EMPR:EX

**From:** Minister, EMH EMH:EX  
**Sent:** Monday, April 4, 2011 3:56 PM  
**To:** MEM Correspondence EM:EX  
**Subject:** DRAFT REPLY- NEW MAIL- FORM LETTER-FW: BC Hydro Lying About Smart Meters - Unions, NDP powerless to stop this!

**From:** Coleman.MLA, Rich [mailto:Rich.Coleman.MLA@leg.bc.ca]  
**Sent:** Tuesday, March 29, 2011 10:46 AM  
**To:** Minister, ENER ENER:EX  
**Subject:** FW: BC Hydro Lying About Smart Meters - Unions, NDP powerless to stop this!



**From:** s.22  
**Sent:** March-29-11 10:35 AM  
**To:** Coleman.MLA, Rich  
**Subject:** BC Hydro Lying About Smart Meters - Unions, NDP powerless to stop this!

The Honourable Rich Coleman,

Sir:

I heard on the news this morning that you have held back Hydro's next rate increase pending further review.  
Hallelujah!

Please see my emails below originally addressed to Marketplace. I sent these because it seemed odd to me that the rapid increase in rates would affect every British Columbian, particularly seniors and other folks on low fixed incomes and your opposition members appeared to be doing little to get the word out to the general public. I am one s.22 among others particularly affected because, s.22 my heat and hot water are Hydro powered. s.22

s.22 For people like us, the first tier rates were set too low so that in the late fall, winter and early spring months, your usage always climbs into the second tier.

If you do some research you will find there is a template for Hydro's FAQ which has been used previously in other jurisdictions and as discussed below, s.22 I have highlighted this information.

Thank you for reviewing this material.

s.22

**From:** s.22  
**To:** marketplace@cbc.ca  
**Subject:** Smart Meters  
**Date:** Wed, 16 Feb 2011 08:19:18 -0800

Sirs/Mesdames:

This is a challenge to a program that appears to be one of the last vestiges of in-depth investigative reporting on television left to Canadian consumers.

Smart Meters deserve a look by your talented research team. They are being installed shortly in British Columbia and if the trend holds true, despite promises that this will save the Hydro ratepayer money (Hydro claims between \$150 and \$450 per household), rates are sure to go up. If you check other jurisdictions such as California and Ontario (and others) you will see they eventually start to use the technology for graduated time of day usage rates. It will cost \$1 billion to install, service, run and maintain these things in BC and even Hydro admits it will take until the 2030's to recoup this capital expenditure with "internal" savings.

BC Hydro currently has an invoice which compares previous years usage by the month with your current usage. This is a satisfactory tool for checking to see how your "Power Smart" efforts are helping to conserve energy and save you money. As well, they claim how important it is that they can "instantly" tell when electricity in a certain part of the grid is down in stormy weather - as though people don't immediately phone in when this occurs.

**If you read their FAQ sheet online you will see a tissue of lies and half-truths, carefully couched in language that allows openings for Hydro to do the very things it claims won't happen. In any other circumstances, if these weren't big utility companies, this material would be considered part of a con job. Here is the link:**

[http://www.bchydro.com/planning\\_regulatory/projects/smart\\_metering\\_infrastructure\\_program/faqs.html](http://www.bchydro.com/planning_regulatory/projects/smart_metering_infrastructure_program/faqs.html)

Thanks for considering this proposal.

s.22

From: s.22  
To: [marketplace@cbc.ca](mailto:marketplace@cbc.ca)  
Subject: BC Hydro Lying About Smart Meters - Unions, NDP powerless to stop this!  
Date: Sat, 19 Mar 2011 09:35:24 -0700

Please refer again to my email below. Here is a quote from "24" the newspaper handout in an article about the huge cost of a freedom of information request:

Hydro hired Corix for \$73 million and Capgemini for \$65 million to install 1.8 million energy monitors province-wide. Hydro wants to finance the \$930 million smart meter program by raising average monthly power rates from \$71 to \$92 by 2014.

<http://vancouver.24hrs.ca/News/local/2011/03/17/17661136.html>

Here is what Hydro says in their Q&A site in the link below:

**3. Will my rates go up because of smart meters?**

No, the project will pay for itself and in fact delivers \$520 million in benefits over 20 years. These benefits mean lower rates for customers, reducing them below what they would otherwise be in the absence of BC Hydro's investment in the program.

- and -

**5. Will customers have to save energy for the Smart Metering Program to work?**

No, more than 80 per cent of the benefits from the program will be delivered through operational efficiencies within BC Hydro. That means customers don't have to take action for the program to pay for itself.

Can time of use rates be far behind?

The NDP, the Hydro unions, BC Federation of Labour and other opponents of this program are powerless to stop it nor do they have the means or will to do so. I think the NDP is waiting to be elected, but by then it will be too late. As I told one of their members, what if you lose? And if they do win, are they going to spend another \$1 billion uninstalling them?

And what next? Brett Hodson, the President and CEO of Corix has been quoted as saying:

"Look, today it's not about water ownership; it's about pipes, valves and meters. Water ownership is a Crown asset and it should stay that way," Hodson says. Still, **when pressed he is reluctant to put limits on private-sector involvement in water. "In 20 or 30 years the market might change. Maybe there will be a market for it and would I change my mind about water ownership? Maybe."** [emphasis added]

As well, his early working life in BC Hydro does throw up a slight smell over the proceedings if he has been dealing with former colleagues.

"Beginning his career in energy as a research assistant with BC Hydro in 1989, Hodson joined BC Gas (later Terasen) two years later."

[http://www.bivinteractive.com/index.php?option=com\\_content&task=view&id=264&Itemid=39](http://www.bivinteractive.com/index.php?option=com_content&task=view&id=264&Itemid=39)

This is a golden opportunity for Marketplace to shine a light on Hydro's machinations for which British Columbians would be eternally grateful.

I would also appreciate the courtesy of a reply.

s.22

<b>MINISTER OF ENERGY</b>			
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REMARKS: _____			
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s.22

March 21, 2011

Honourable Rich Coleman  
Minister of Energy and Mines (Minister Responsible for Housing )  
Province of British Columbia  
PO Box 9060 STN PROV GOVT  
Victoria, BC  
V8W 9E2

MINISTRY OF ENERGY AND MINES	
<b>RECEIVED</b>	
APR 06 2011	
DEPUTY MINISTER'S OFFICE	
LOG#	58395

Dear Minister:

**Subject: BC. UTILITIES COMMISSION - IMPENDING REVIEW**

I noticed in the attached newspaper clipping from The Vancouver Sun published on March 17, 2011 that the Government of British Columbia plans to review the role of the British Columbia Utilities Commission (paragraph five).

This is excellent news, and I applaud the new Government for taking this important action! I feel the BCUC's role as an independent regulator is very important for British Columbians and is strongly "in the public interest". I would like to see the Government restore the BCUC to its original role before the implementation of the *Clean Air Act*.

One of the serious problems I see with the "current status quo" is that BC Hydro has been exempted from important and essential scrutiny by the BCUC. The BCUC needs to have its legal authority restored so that it can regulate the activities of BC Hydro.

Thank you.

Yours sincerely,

s.22

attachment

r662



# BC HYDRO | Justify rate increases and smart meters, Coleman tells utility

BY GORDON HAMILTON

VANCOUVER SUN

Energy Minister Rich Coleman has put BC Hydro on warning, saying he intends to conduct an in-depth review of the utility and wants it to provide detailed justification for its plans for the province's energy system.

He especially singled out the \$1.1-billion smart metering program and a proposal to raise electricity rates 50 per cent over the next five years.

"One of the jobs I have to do, is go sit down with BC Hydro, look at their whole business plan, look at it for justifications of things they might or might not want to do and one of the issues is obviously those rates," Coleman said in a scrum Tuesday before entering a caucus meeting in Victoria.

It's also time for "a sober, second look" at the smart metering program, he said.

He said the role of the B.C. Utilities Commission in scrutinizing Hydro — altered in 2008 by the Gordon Campbell government — is also up for review.

BC Hydro turned down a request for an interview on Coleman's plans for a review, restricting comment to a brief email statement by communications vice-president Renee Smith-Valade.

"We welcome minister Rich Coleman as British Columbia's new minister of energy and mines. We look forward to developing a strong relationship with him and his team and engaging in a good discussion on the future of energy in B.C.," she stated.

But how much flexibility the new energy minister will have in changing policies already underway remains to be seen.

University of B.C. energy policy expert George Hoberg said Campbell introduced a number of high-profile changes in energy policy, so it makes sense it would be one of the first issues Premier Christy Clark attempts to address.

"I'm not surprised that the Clark government would want to do a comprehensive review of these policies because Campbell really did bring in quite extensive changes to a number of areas in electricity policy."

First, he said, politicians and the public need to adjust to the fact that Hydro is basing the rate increase on a long-overdue overhaul of the provincial electricity system.

"Electricity rates in British Columbia need to go up," he said in an interview. "The

request that BC Hydro is making for 50-per-cent rate increases does not include future growth of electricity supply.

"Those are designed to essentially upgrade the system that we have so successfully depended on for 50 years. It was built a long time ago and we haven't invested in keeping it up."

Hoberg said the new Clark government has two separate issues to deal with.

One is what needs to be done to maintain the existing power system, such as the rate increase and smart meters; the other is what is needed for the future, which includes contracts already signed with independent power producers.

Clark's challenge will be to keep the issues separate. Her critics will try to link them, he said, making energy one of the hot-button issues in the next election.

In an interview, Paul Kariya of Clean Energy B.C. said regardless of whether new energy sources come from independent power producers or are developed by BC Hydro, capital costs will be far higher than they were when Hydro completed its last major project, the Revelstoke dam, in 1984.

Hoberg said smart metering is part of the package of things that need to be done now, but he sees no real benefit to it unless it is coupled with a time-of-use pricing policy, where consumers pay more at peak energy times of the day and less at times of lower demand.

"I have never understood the economic logic of having smart meters if you did not have time-of-use pricing."

In its business plan for smart meters, Hydro lays out a number of benefits, but does not say specifically that there will be time-of-use pricing. Consumers will be able to monitor their use and make their own decisions, the plan states.

Future decisions are largely being driven by the Campbell government's energy self-sufficiency policy, said energy watchdog Jim Quail, of the B.C. Public Advocacy Centre.

That policy calls for Hydro to achieve a surplus under all conditions except the very worst, "so it means in any real scenario there will be a surplus."

"There is some room there to avoid expenditures."

Quail also criticized Hydro for publishing conflicting claims on the benefits of the meters.

In its proposal to the B.C. Utilities Commission for rate increases over the next three years, Hydro states the \$1.1-billion smart meter program will save \$20.7 million by snuffing out energy theft.

But in its business plan, where it is trying to convince government that meters are a good thing, it states they will save \$100 million.

"They give us a huge, unsubstantiated number when they want to show the meters are a good idea, but when it comes to identifying real savings, which they can pass on to customers, all they can find is \$20.7 million, which is swamped in red ink from the huge cost of buying and installing the meters."

[ghamilton@vancouver.sun.com](mailto:ghamilton@vancouver.sun.com)



## **TERMS OF REFERENCE**

### **REVIEW OF BC HYDRO**

#### **BACKGROUND:**

BC Hydro is a regulated provincial Crown corporation reporting to the Ministry of Energy and Mines. As the third largest electric utility in Canada, BC Hydro serves 95 percent of the population of the province or approximately 1.8 million customers. In addition, BC Hydro supplies electricity to the province's commercial and industrial users. BC Hydro's primary business activities are the generation and distribution of electricity of which, 90 percent is produced by the company's hydroelectric facilities. Pursuant to legislation, BC Hydro is responsible for providing an efficient and reliable supply of electricity and is required by government to generate and deliver energy in ways that are both environmentally and socially responsible and balance British Columbians' energy needs with the concerns of the environment.

On March 1, 2011, BC Hydro filed its most recent application with the British Columbia Utilities Commission, seeking approval for rate increases of 9.73% for each of the next three years. Significant concerns have been expressed regarding the impact the rate increase will have on BC families and other power consumers. As such the Premier and the Minister of Energy and Mines [on behalf of the Province, as principal of BC Hydro] have appointed a panel to undertake a review of BC Hydro in order to provide recommendations and options for minimizing the rate increase by examining both the operating and capital requirements of the company. Ultimately, these recommendations will inform BC Hydro's final rate submission to the BC Utilities Commission.

The panel members include the Deputy Minister to the Premier, John Dyble, the Deputy Minister of Finance, Peter Milburn, and the Associate Deputy Minister of the Environmental Assessment Office, Cheryl Wenezenki-Yolland. The panel's review will include a financial and administrative review, including consideration to rates structures and may consider corporate governance to the extent it provides opportunities for improved effectiveness and efficiency. The objective of the review is to ensure costs are minimized and the benefits to the province, taxpayers and ratepayers are maximized. The panel will report back to the Premier and Minister by the end of June, 2011.

This review will not alter or interfere with the normal, more detailed rate increase review which BCUC undertakes pursuant to its statutory authority.

## **PURPOSE & OBJECTIVES:**

The Panel will review and evaluate and, as appropriate, make recommendations respecting the following:

1. Examine BC Hydro's Financial Performance (including)
  - a. Operating costs, the adequacy of cost containment strategies – identify opportunity for savings, efficiencies and economies of scale, review of administrative expenses
  - b. Appropriate planning and utilization of Capital and spending in regard to capital
  - c. Reliability of forecasting and internal systems
  - d. Effectiveness of procurement approaches in achieving maximum value for money
  - e. Effectiveness of and opportunities in regards to revenue structure and rate structure
2. Effectiveness of BC Hydro's Governance Framework (including)
  - a. Organizational Structure - for example have the benefits of the consolidation of BC Transmission Corporation and BC Hydro been realized
  - b. Effectiveness of short and long term business planning
3. Other matters that may arise over the course of the review that the panel deems appropriate

## **RESOURCES:**

Primary support for the panel will be provided by the Ministry of Finance. The panel will draw on expertise from the Ministry of Energy and Mines and other government agencies as necessary and/or may contract for area specific expertise.

**FILE COPY**

JUN 30 2011

s.22

Dear s.22

Thank you for your letter regarding the BC Hydro review.

Since you wrote to me, I have initiated a formal review process and I am enclosing the terms of reference for your information. The main objective of the BC Hydro review is to provide recommendations and options to ensure costs are minimized and benefits to British Columbian families and BC Hydro customers are maximized.

The results of the review will inform BC Hydro's final rate submission to the British Columbia Utilities Commission.

Thank you, again, for writing.

Sincerely yours,

Rich Coleman  
Minister

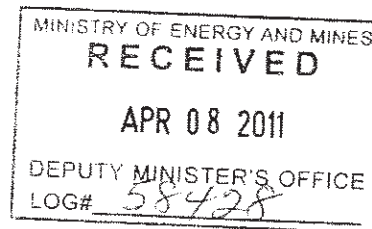
Enclosure

**Firth, Janet MEM:EX**

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**From:** Minister, EMH EMH:EX  
**Sent:** Thursday, April 7, 2011 8:44 AM  
**To:** MEM Correspondence EM:EX  
**Subject:** DRAFT REPLY- NEW MAIL-FW: Role of export policy in BC Hydro Review  
**Attachments:** The\_Export\_Question as published.pdf; Electricity Exports Gaps MR 2011 final final.pdf

**From:** Coleman, MLA, Rich [mailto:Rich.Coleman.MLA@leg.bc.ca]  
**Sent:** Tuesday, March 29, 2011 10:05 AM  
**To:** Minister, ENER ENER:EX  
**Subject:** FW: Role of export policy in BC Hydro Review



**From:** s.22  
**Sent:** March-29-11 8:51 AM  
**To:** Coleman, MLA, Rich; EMH.Minister@gov.bc.ca  
**Cc:** Carr, Steve MEM:EX; Coley, Simon J EMPR:EX; MacLaren, Les EMPR:EX  
**Subject:** Role of export policy in BC Hydro Review

Dear Minister Coleman,

As you conduct the review of BC Hydro rates and other issues, I hope you will consider the White Paper I co-authored on the Clean Energy Act's move to add net exports to the policy objectives of BC electricity policy.

The paper was written for the Pacific Institute of Climate Solutions, and was based on a process of widespread consultation and consensus building among stakeholders in the field. It contains specific recommendations for how to address the significant gaps in the export policy framework.

1. Specify, through regulation, that it will only authorize export development if there are net economic, social and environmental benefits to the province.
2. Institute mechanisms for revenue-sharing with local communities affected by large new energy development projects.
3. Set upper limits on the proportion of BC electricity that can be dedicated to the export market so that electricity exports do not jeopardize the reliability of domestic supply.
4. Make export contracts conditional on the importing jurisdiction having meaningful demand-side management (energy conservation and efficiency) to ensure overall GHG reductions.
5. Base all electricity exports on a planning and approval process that fosters public legitimacy and promotes environmental, social, and economic sustainability in BC.
6. Supplement province-wide long-term energy planning with a regional energy planning process to address the cumulative effects of multiple projects in the same region.

The white paper can be read at [http://pics.uvic.ca/white\\_papers.php](http://pics.uvic.ca/white_papers.php)

The paper and the accompanying media released are attached.

I would be happy to answer any questions on the paper.

Sincerely,

s.22



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## MEDIA RELEASE

10 February 2011

### Report reveals gaps in BC's electricity export policy framework

If British Columbia ramps up production to become a major electricity exporter there is no guarantee the province will gain new market access, warns new research out today from the Pacific Institute for Climate Solutions (PICS).

The report, *The Export Question: Designing Policy for British Columbia Electricity Trade*, is an independent white paper for government from PICS, a collaboration of BC's four research-intensive universities hosted and led by the University of Victoria. The white paper examines both the opportunities and the risks that the expanded export of electricity presents for the province.

Lead author Dr. George Hoberg says the Clean Energy Act 2010 shifted BC's energy policy from self-sufficiency to a net export focus, and with major projects such as the Peace River Site C dam and transmission grid extensions now pending, BC citizens want to know the real costs and benefits. However, he says while electricity markets are expanding and opportunities clearly exist, the potential for BC energy exports are uncertain.

"The slow economic recovery is expected to continue dampening growth, along with electricity demand domestically and among United States' importing jurisdictions. We also need to be aware of the emerging 'renewable portfolio standards' (RPS) markets in the US that may use restrictive definitions of 'renewable' to exclude BC's hydro-electricity power," Hoberg says.

For example the report notes that the state with the largest potential market, California, currently defines "renewable" to exclude electricity obtained from large dams (greater than 30 MW), meaning that the overwhelming majority of BC's current supply mix, and planned schemes such as Site C, probably wouldn't qualify, despite hydro's reputation as a renewable energy. With California requiring 33 percent of its electricity to be renewable by 2020, if BC is to meet RPS rules it will need supply from eligible green energy projects, and increased transmission capacity.

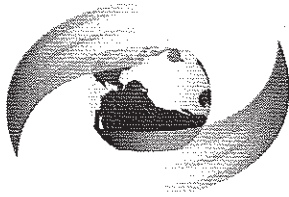
According to Hoberg, "There are also significant gaps in the policy framework that threaten to jeopardize public confidence in the export strategy. There's no guarantee that ratepayers and taxpayers won't be subsidizing exports. And the planning process is not adequate to address the environmental and social risks of the project." The government could address these gaps by pursuing the following recommendations:

1. Specify, through regulation, that it will only authorize export development if there are net economic, social and environmental benefits to the province.
2. Institute mechanisms for revenue-sharing with local communities affected by large new energy development projects.
3. Set upper limits on the proportion of BC electricity that can be dedicated to the export market so that electricity exports do not jeopardize the reliability of domestic supply.
4. Make export contracts conditional on the importing jurisdiction having meaningful demand-side management (energy conservation and efficiency) to ensure overall GHG reductions.
5. Base all electricity exports on a planning and approval process that fosters public legitimacy and promotes environmental, social, and economic sustainability in BC.
6. Supplement province-wide long-term energy planning with a regional energy planning process to address the cumulative effects of multiple projects in the same region.

The white paper can be read at [http://pics.uvic.ca/white\\_papers.php](http://pics.uvic.ca/white_papers.php)

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# The *Export* Question: Designing Policy for British Columbia *Electricity Trade*

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and Amy Sopinka, University of Victoria

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## EXECUTIVE SUMMARY

When it brought in its *Clean Energy Act* in 2010, the Government of British Columbia (BC) included as a provincial energy policy objective the promotion of electricity exports from clean or renewable sources. The government sees electricity exports as being both a significant means of economic development for BC and an opportunity to reduce greenhouse gas (GHG) emissions in importing jurisdictions. Critics of the revised policy, however, are concerned about the environmental and social impacts of developing new a energy supply for export, and question the economic rationale for a net export policy.

This white paper examines both the opportunities and the risks that the expanded export of electricity presents for BC. The paper describes how BC's electricity trading works, summarizes electricity trade trends in the province, discusses the province's evolving policy towards electricity exports, examines BC's potential export market, and evaluates a range of issues tied to designing export policy.

While the government has declared its objective of seeing BC become a major net exporter of electricity, it has done so with insufficient public consultation, amidst much opposition, and in the face of considerable economic uncertainty. Expanded electricity exporting by BC could contribute substantially to provincial economic development, while also reducing GHG emissions in importing jurisdictions. Yet, the prospect poses significant economic, environmental and social risks. The market potential of BC electricity exports is highly uncertain, and some states, such as California, have policies that create particular challenges for BC's hydroelectric resources.

Significant gaps in the policy framework remain. The Act provides for two different types of export projects, one through the Integrated Resource Plan process, and one through the surplus created through the "self-sufficiency" requirement. The Act protects the ratepayer from the risks of the first, but not the second. In neither case does the Act protect taxpayers from subsidizing export projects. The Act provides little guidance on how stakeholders and the public will be involved in the planning process, and does nothing to address the gap in regional energy planning.

The government could address many of these concerns by articulating clear and comprehensive terms and conditions, in policy and regulations, to govern how electricity exports will be developed and managed in future. This white paper recommends the following:

1. The government should specify, through regulation, that it will only authorize export development if there are net economic, social and environmental benefits to the province.
2. The government should consider instituting mechanisms for revenue-sharing with local communities affected by large new energy development projects.
3. Upper limits should be set on the proportion of BC electricity that can be dedicated to the export market, so that electricity exports do not jeopardize the reliability of domestic supply.
4. Export contracts should be conditional on the importing jurisdiction having meaningful demand-side management (energy conservation and efficiency) to ensure overall GHG reductions.
5. All electricity exports should be based on a planning and approval process that fosters public legitimacy and promotes environmental, social, and economic sustainability in BC.
6. Province-wide long-term energy planning should be supplemented with a regional energy planning process to address the cumulative effects of multiple projects in the same region.

## 1. INTRODUCTION

The BC government's decision to expand electricity exports through the *Clean Energy Act* has intensified the controversy already ignited over BC's electricity policy as a result of a previous policy change. In 2002, the government declared that all new sources of electricity in the province (other than at Site C or connected to upgrades at existing facilities) had to be acquired from the private sector. That decision provoked a strong backlash from interest groups and members of the public concerned about the impact that increased private sector involvement in electricity generation would have on the environment, affected communities, and fair pricing.<sup>1</sup>

The two issues – new electricity sources and producing electricity for export – have become indelibly linked in the minds of some groups, with many of those opposed to BC's electricity policy objecting to new sources of power being built by the private sector to supply the export market rather than to serve the needs of BC customers.

This white paper examines both the opportunities and the risks that the expanded export of electricity presents for BC. The paper has four main sections:

- a brief description of how BC's electricity trading works and a summary of electricity trade trends in the province;
- a discussion of the province's evolving policy towards electricity exports;
- a discussion of the factors influencing the potential export market for BC electricity; and
- an evaluation of a range of issues tied to designing export policy, along with recommendations for policy-makers.

This paper builds on the facilitated dialogue that took place at the FutureGrid forum hosted by the Pacific Institute for Climate Solutions (PICS) on June 15, 2010. At that forum, approximately 100 participants discussed and debated the question "Under What Conditions Should British Columbia Become a Major Exporter of Electricity?" The outcomes of that dialogue, and of subsequent discussions with stakeholders, inform the evaluation of policy principles and the ensuing recommendations, presented in the last part of this paper.

## 2. BC'S ELECTRICITY TRADE PICTURE: CONTEXT AND TRENDS

### 2.1 How Electricity Trading Works

BC's electricity system is connected to that of the United States (US) along the border with Washington State. There are two crossings: one in the Lower Mainland and the other in the Interior near Trail. The BC Hydro system is also connected to Alberta near Cranbrook. In recent years, BC's north-south electricity trade with the US has been about 10 times greater than its east-west trade with Alberta.<sup>2</sup>

In geographic scope, BC's electricity export market is determined by how the North American grid is organized. The reliability of the continent's electricity system is maintained and enforced by the North American Electric Reliability Council (NERC), which has nine regional coordinating councils. The largest of these is the Western Electricity Coordinating Council (WECC) made up of the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and the 14 western states in between. BC is able to flow its electric power to these WECC markets through its interconnections with Alberta and the United States.

Powerex is the subsidiary of BC Hydro created in 1988 to handle electricity trading. There are four kinds of trades:

1. BC trades for domestic needs: In this type of trade, Powerex buys electricity from Alberta or the US because BC Hydro is not generating enough to meet BC's domestic needs; it sells power to other jurisdictions when BC Hydro has excess supply.
2. BC trades for revenue: In this type of trade, Powerex buys electricity from Alberta or the US to take advantage of prices that fluctuate by time of day and season. This trading is conducted to make a profit for BC Hydro, not to meet domestic power needs.
3. Flow-through trades: In this type of trade, electricity is traded between Alberta and neighbouring American states. Because Alberta currently does not have transmission capacity to the US, this power flows through BC transmission lines, but it is not produced or used in BC.
4. Non-BC trades: In this type of trade, Powerex is authorized as an electricity trader in the US market, so it can buy and sell power between various US utilities – for example one in Oregon and another in California and Arizona – even though there is no flow of electricity across BC boundaries.

The BC electricity trade debate has largely been about whether the province is producing enough power on its own to meet the needs of BC consumers. As a result, the first type of trading – BC trades for domestic needs – is the most directly relevant to this trade debate. While there are no publicly available data that allow us to distinguish the relative magnitude of these different kinds of trades, Powerex officials have stated that the “BC trades for domestic needs” category is less than 10% of the total.<sup>3</sup>

It is important, however, to recognize that the province, and ratepayers, have benefited from this electricity trade. Both the 2002 and 2007 Energy Plans affirm a policy that BC Hydro ratepayers will benefit from electricity exports. In implementing this policy, the province decided that any net trade revenues above \$200 million in any fiscal year go to the government as BC Hydro's shareholder. Annual trade income amounts between zero and \$200 million

go to ratepayers, reducing BC Hydro's revenue requirement.<sup>4</sup> If Powerex loses money (i.e. negative net income), the ratepayer is protected and the loss would come off the dividend payment to the province.<sup>5</sup> Year to year variations in trade income are stabilized using a trade income deferral account. Given that trade income averages around \$180 million per year, rates are about six percent lower than they would be if the government kept all the net income. To do otherwise would mean that the customers who pay for the storage, generation, and transmission systems that create the export revenues would not benefit.

## 2.2 Patterns and Trends in the Trade

### The Effect of Different Data Sources on the Trade Debate

The nature and source of the data typically cited to show whether BC is a net importer or a net exporter of electricity have complicated both the debate over BC's electricity policy, as well as analyses of patterns and trends in the province's electricity trade.

On the one side, the government and private power producers argue that BC Hydro has increasingly had to import power from other jurisdictions to meet provincial demand. This, they say, makes BC a net importer and shows that the province requires more sources of power. An example of evidence cited to support this claim can be found in a 2009 newspaper article, in which Steve Davis, then President of the Independent Power Producers Association of BC, says, "Prior to fiscal 2008, BC Hydro was a net importer of electricity for seven consecutive years."<sup>6</sup>

On the other side, critics of the government's energy policy argue that the province continues to be a net exporter of power. An example of evidence cited to back up this claim can be found in the same 2009 article, where the Western Canada Wilderness Committee's Gwen Barlee says, "According to BC Stats, the province has been a net exporter of electricity for seven out of the last 11 years."<sup>7</sup>

So, who is right? Which statement is true and supported by official electricity trade statistics? In fact, both statements are, depending on which source of data is used and how the amount of an existing electricity trade entitlement that BC has with the US is calculated and accounted for.

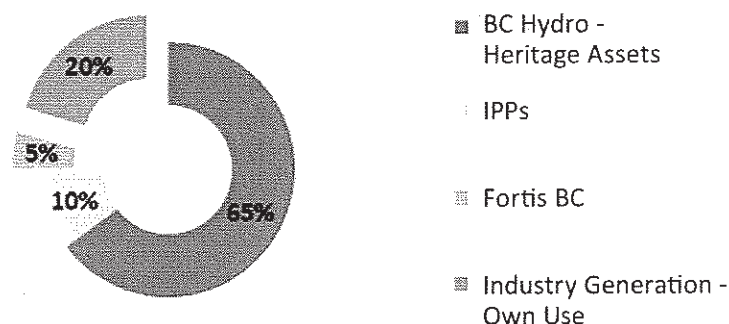
**Data sources: BC Hydro vs. independent organizations** – The main reason for the differences in claims about the electricity trade balance lies in whether one is using data from BC Hydro or data from third-party organizations such as BC Stats or Statistics Canada.

The BC Hydro data are based on BC Hydro's power system. BC Hydro is by far the largest power-generating body in the province and, being a Crown corporation, is the body over which the government has the most direct control. But it is not the only source of generation in the province, as shown in Figure 1 on page 8. There are three other types of players:

- Large industrial generators provide power for their facilities, and may have surplus power to put on the grid. The most notable of these are the two large smelters in the province: Rio Tinto Alcan in Kitimat and Teck in Trail. Industrial power generation has contributed about 20% of total BC electricity generation over the past five years.<sup>8</sup>
- Independent power producers (IPPs) contribute an additional 10% of generation, although when BC Hydro reports its figures, it includes IPPs in its definition of the "BC Hydro system."<sup>9</sup>

- Fortis BC is a privately owned utility that operates in the Kootenays. It accounts for about five percent of BC's power generation.

Despite how it dominates our thinking about electricity in BC, the BC Hydro system (including IPPs) generates only about three-quarters of the province's electricity. The data from BC Stats and Statistics Canada is more comprehensive because it includes those sources outside of the BC Hydro system.



Source: CAN SIM Table 127-002, Fortis Annual Reports (2004-2009), BC Hydro Annual Reports (2004-2009)

**Figure 1: BC electricity generation by power producer (five-year average, 2005-2009).**

**The “Canadian entitlement” calculations** – The second key complicating factor in the measurement of BC's electricity trade balance is how the Canadian entitlement to downstream benefits of the Columbia River Treaty is counted. Under this treaty, BC agreed to build dams on the Canadian portion of the river to help the US with flood control. The province's dams also increase the amount of energy that the US can get from its dams. In exchange, BC receives an entitlement of about 1,350 MW of power (compared to BC Hydro's total capacity of about 11,280 MW).<sup>10</sup> While this power is occasionally used within BC, Powerex frequently sells it in the US market and BC earns revenue without ever physically importing the electricity.<sup>11</sup>

Some argue that this Canadian entitlement should be considered part of the domestic energy resource, since by treaty BC is entitled to that electricity for domestic use. If it were calculated that way, the province's net trade balance would look more favourable. Important to recognize, however, is that there is no guarantee that the Columbia River Treaty will continue under its current terms after its minimum length of 60 years expires in 2024.<sup>12</sup> This means that BC may not be able to rely on the Canadian entitlement as a source of electricity in the long term.

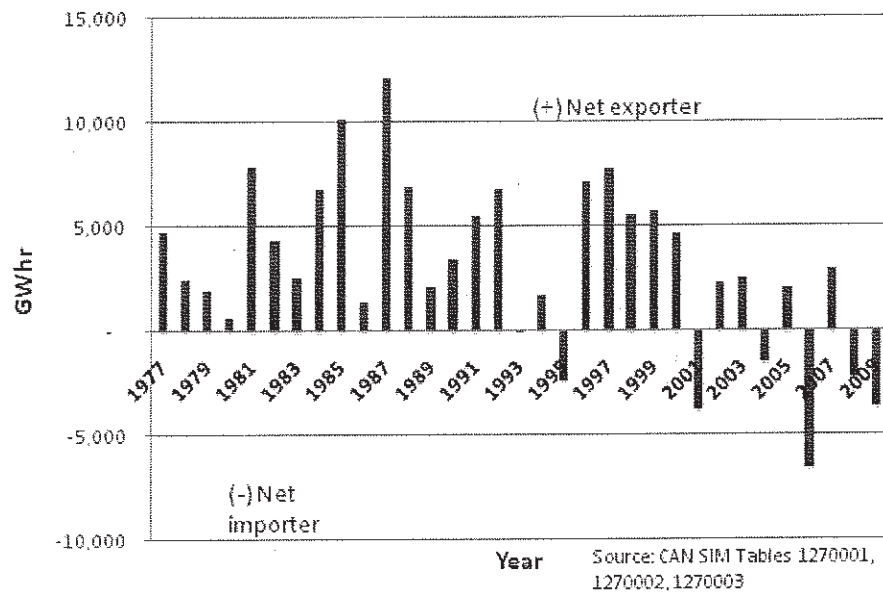
In analyzing trends in imports and exports for this paper, we have chosen to use Statistics Canada data because it includes the BC Hydro system as well as sources outside of it.

#### BC's Shift from Net Exporter to Net Importer of Electricity

Figure 2, which shows BC's electricity balance of trade over the past 30 years, makes it apparent that before 2000, BC was in a strong net export position with electricity.<sup>13</sup> The significant fluctuations in import and export levels over that time are also apparent. These fluctuations result from the changing conditions that can affect supply and demand from year to year, such as the amount of precipitation filling BC reservoirs, weather impacts on



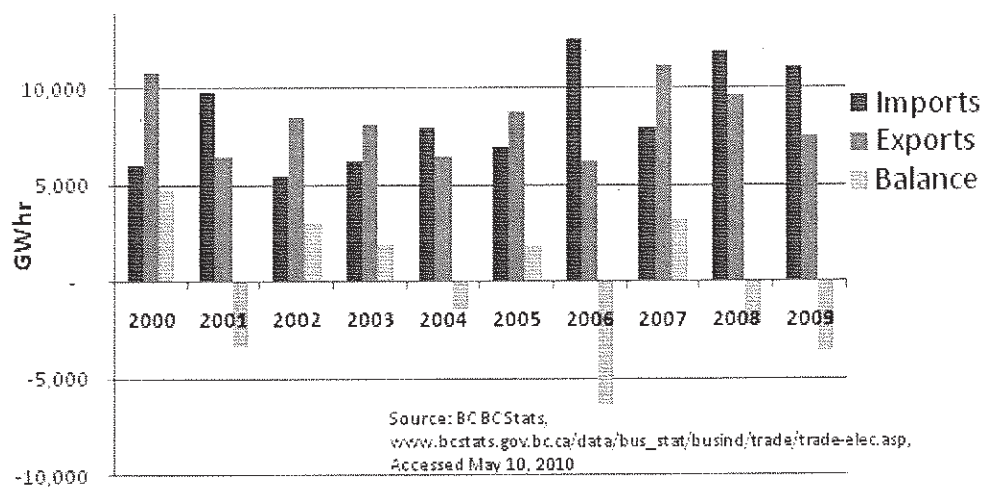
demand for heating and cooling, economic activity in the commercial and industrial sectors, and the price of natural gas and electricity in importing jurisdictions.



**Figure 2: BC's electricity balance of trade, 1977–2009.**

Over the past decade, but in particular over the past five years, the trade balance has deteriorated. As shown in Figure 3, BC has been in a net import position for three of the past five years (and four of the past six years). Since 2005, the province has consumed an average of two percent a year more power than it has produced.

However, if the additional 4,900 GWh/yr of electricity earned in BC through the Columbia River Treaty's Canadian entitlement were defined as a domestic resource, the trade gap in electricity would disappear, and the deficit of two percent over the past five years would be converted to a surplus of five percent overall.



**Figure 3: BC's electricity imports, exports, and trade balance, 2000–2009.**

## In Summary

Before this current decade, BC regularly produced more power than it consumed. Over the past five years, however, the province has shifted to consuming slightly more power than it produces, with BC Hydro having to import power to fill the gap. However, if the province were to have redefined the Canadian entitlement from the Columbia River Treaty to be a domestic source of supply, BC would have shown a modest excess supply available for export.

## 3. BC'S SHIFTING ENERGY POLICY CONTEXT

BC's energy policy in relation to electricity trade has undergone considerable shifts over the past several decades. Over that time, the core objective of policy has moved through three stages: cost-effective reliability, self-sufficiency, and now net export.

### 3.1 From Reliability to Self-Sufficiency to Export

Prior to 2007, policy was oriented towards providing "reliable, cost-effective electricity supply in an environmentally responsible manner."<sup>14</sup> During the 2000s, world events and the shifting balance between electricity supply and demand in the province gradually turned the focus to electricity self-sufficiency.

As the trade trends presented earlier in this paper show, BC had been a net exporter of electricity through the 1980s to late 1990s and right up until about 2005. As domestic demand continued to increase but no new capacity was installed, however, the trade balance deteriorated. That situation, combined with witnessing the electricity crisis in California in 2000 and 2001 (in which market manipulation by US trading companies, poor regulatory design in California, along with other factors, led to supply shortages and several utilities declaring bankruptcy<sup>15</sup>) dramatically alerted BC policy-makers to the importance of energy security.

The province's 2007 Energy Plan reflected this new concern and gave precedence to the objective of provincial self-sufficiency. The plan required that BC become self-sufficient in electricity by 2016, and that by 2026 it also have additional insurance of 3000 GWh/year. Critics have argued that this self-sufficiency policy, especially the way it has been defined, imposes substantial costs on the province beyond what would be necessary to ensure cost-effective reliable supply.<sup>16</sup> When this self-sufficiency standard was implemented, the government specified that, in calculating the amount required for the province to be self-sufficient, BC Hydro had to assume "critical water conditions" – defined as meaning the most adverse water conditions in the historical record. The result of this conservative definition would be that in most years BC Hydro would have a substantial surplus of power available to export.

Thus, in effect, the province's self-sufficiency standard contained an implied export policy. However, because of the way it was interpreted at the time, it did not allow for BC Hydro to explicitly plan and make long-term contracts for the export market.

By the fall of 2009, the BC government had begun to focus more explicitly on the goal of going beyond self-sufficiency to becoming a net exporter of electricity. While there were earlier initiatives to foster electricity exports,<sup>17</sup> the government's new vision of BC as a "clean energy powerhouse" established new priorities. This change in direction was first formally signalled in the August 2009 Speech from the Throne when the government proclaimed it would "take every step necessary" to become that powerhouse. The government also appointed the

Green Energy Advisory Task Force in the fall of 2009, giving it the mandate “to recommend a blueprint for maximizing British Columbia’s clean power potential, including a principled, economically-viable and environmentally-sustainable export development policy.”<sup>18</sup> One of the four groups created within the task force was charged with exploring the potential export market for BC’s clean and renewable electricity.

### 3.2 The Export Opportunities and Risks Identified by the Green Energy Task Force

The task force’s report, released by the government in April 2010, was generally very optimistic about the benefits of pursuing electricity exports, especially given the increasing demand for low-carbon energy. The province’s most important asset, according to the task force, is its hydroelectric storage capacity that allows it to help its own and other jurisdictions cope with the fluctuations in power supply created by increasing reliance on intermittent sources of renewable power. BC is also in an advantageous situation because its peak demand is in the winter and the peak demand of its largest potential export market, California, is in the summer. This means that BC is likely to have excess power to sell to California when the state needs it the most.

The task force did, however, also identify risks of an export strategy. The report notes that policies in importing jurisdictions might not treat BC’s exports favourably; that there are significant financial risks, especially given the costs and lead time of building new transmission capacity; and that new technologies could emerge that would undercut BC’s competitive advantage.

To manage these risks, the task force recommended adopting a strategic approach to exports by increasing export market access, partnering with US entities to build requisite transmission capacity, increasing clean energy supply in BC through regular, predictable clean power calls, and investing in increases in electricity storage capacity.<sup>19</sup>

### 3.3 Explicit Authorization of Net Exports in the New Clean Energy Act

BC’s new *Clean Energy Act*, introduced in April 2010 and passed two months later, establishes an explicit net export policy.<sup>20</sup> The Act has five provisions directly relating to exports:

- First, the Act lays out 15 objectives for energy policy, with one dealing explicitly with exports. Under that objective, BC aims “to be a net exporter of electricity from clean or renewable resources with the intention of benefiting all British Columbians and reducing greenhouse gas emissions in regions in which British Columbia trades electricity while protecting the interests of persons who receive or may receive service in British Columbia” (Section 2(n)).
- Second, the Act requires that BC Hydro include planning for the export market in its new “integrated resource plan” (IRP) (Section 3).
- Third, if the government determines after receiving the IRP that it is in the public interest to do so, the Act gives Cabinet the authority to direct BC Hydro to acquire new sources of power for export and ensure the necessary transmission capacity for it (Section 4(1)(b)). Such decisions would not be subject to review by the British Columbia Utilities Commission (BCUC).
- Fourth, the BCUC, when it sets rates for BC Hydro, is prohibited from recovering the costs of the export projects authorized under a Section 4 determination of the govern-



ment after receiving the IRP. In other words, ratepayers should not be subsidizing the export contracts established under this provision.

- Fifth, the Act authorizes the government to develop a regulation to allow BC Hydro to engage in export contracts for the electricity planned for meeting the “self-sufficiency with reserve” obligation (Section 35(1), referring to Section 6(3)). By stating that the self-sufficiency obligation needs to be met “except to the extent that the authority may be permitted, by regulation, to enter into [export] contracts”, the Act in fact permits the export contracts established under this provision to override the “self-sufficiency with reserve” requirement. In other words, there are now two distinct avenues through which BC Hydro can develop new export contracts: (1) the IRP and (2) the surplus created by the conservative definition of self-sufficiency.

This distinction is important because the *Clean Energy Act* treats these two avenues quite differently. When pursued through the IRP, the export contracts need to meet a public interest test and need to insulate ratepayers from the costs of export projects. But neither of those provisions applies to an export contract developed with the self-sufficiency “surplus.”

The *Clean Energy Act* brings changes to BC electricity policy that will, indirectly, also affect export policy. The most significant change in the Act is a dramatic reduction in the scope of authority of the BCUC. Whereas the previous long-term electricity plan was reviewed and approved by the independent regulatory commission, the IRP will now be approved directly by Cabinet. (The projects, programs and contracts associated with implementing that plan will be subject to BCUC approval). A number of significant projects are also explicitly exempted from review by the commission.

### In Summary

The primary objectives of BC electricity policy have shifted dramatically over the past several years. In 2007, the province shifted away from its established policy of cost-effective reliability to self-sufficiency with reserve. Just three years later, in 2010, the province shifted gears again to a new focus on becoming a “clean energy powerhouse” by pursuing net exports of electricity. In addition to adding the net export objective, the fine print of the *Clean Energy Act* authorizes using the “self-sufficiency surplus” for long-term export contracts as well. The rapid changes in policy and complex treatment of exports from the self-sufficiency reserve create uncertainty and confusion about the direction of BC electricity policy.

## 4. ESTIMATING BC'S ELECTRICITY MARKET POTENTIAL

The size of the potential market for BC electricity exports is influenced by three main factors:

- growth in electricity demand (load) in importing jurisdictions, which in turn is influenced by aspects such as the amount and composition of economic growth in those jurisdictions' own export markets;
- policies in importing jurisdictions, especially those policies related to GHG reduction and/or renewable generation; and
- price and availability of energy supply from competing jurisdictions.

All of these factors are not only interconnected, but also very difficult to predict, especially over the five-to-seven year planning horizons of new energy developments. For example, few would have predicted the discovery of massive quantities of shale gas in the past several years, which have transformed not only natural gas markets, but power markets as well. Because natural gas is a reliable and increasingly cost-effective substitute for coal-fired generation, this supply shift threatens the market for renewable power. Future export market prospects are therefore characterized by great uncertainty.

These three factors are discussed below.

### 4.1 The Influence of the Growth in Electricity Demand in Importing Jurisdictions

The size of the export market is determined in part by how much load growth will occur in importing jurisdictions, which in turn is largely driven by economic growth.

Both Canada and the US are experiencing slow to moderate economic growth since the beginning of the global recession in December 2007. According to the most recent projections by the non-partisan Congressional Budget Office, economic growth for the US as a whole is projected to average 2.9% over the next 10 years.<sup>21</sup> The same trend is predicted for Canada. The Bank of Canada's July 2010 Monetary Report states that "the economic recovery in Canada is expected to be more gradual [than previously anticipated], with growth of 3.5 per cent in 2010, 2.9 per cent in 2011, and 2.2 per cent in 2012."<sup>22</sup> This dampened growth will likely impact the amount of electricity required both domestically and in the WECC markets which in turn will influence the amount of surplus energy available for export and the demand for clean energy elsewhere.

#### The Influence of Policies in Importing Jurisdictions

BC electricity exports are most likely to occur through three different channels. First, as they are now, BC exports could simply go out to meet the supply needs of importing jurisdictions. Second, BC exports could go out to meet specific environmental requirements of importing jurisdictions. There are two potential types of such requirements: renewable electricity requirements, and GHG offsets. Both of these environmental requirements overlap significantly. Some importing jurisdictions may treat these as part of the same need, but others may view them as distinctly different – in which case they will emerge as distinct export market niches.

Most of the analysis performed to date focuses on the market opportunity potentially afforded by this second channel of the so-called "renewable portfolio standards" market.

## 4.2 Renewable Portfolio Standards

Both to reduce GHG emissions and to stimulate green jobs, a number of jurisdictions have adopted renewable portfolio standards (RPS), which require retail electricity suppliers to ensure that a certain minimum quantity of the energy they deliver comes from an eligible renewable resource. In the US, the District of Columbia and 29 states, including most WECC states, have passed RPS legislation and seven states have developed RPS goals. These policies are subject to change both in terms of the size of the target and the type of energy that can be used to meet it.

At present, a number of states (including California) define “renewable” to exclude electricity obtained from large dams. Under these provisions, BC’s “heritage assets” are not eligible at present to count towards meeting the renewable portfolio standards of many jurisdictions. California has a very aggressive set of targets for renewable electricity, requiring 20% renewable by 2010 and 33% renewable by 2020. BC wind projects would qualify. Hydro projects would seem to fit the bill, but to qualify in the California RPS market they must be less than 30 MW in size. Even more restrictive, the eligibility requirements prohibit the facility from “adversely impacting the instream beneficial uses or causing a change in the volume or timing of streamflow.”<sup>23</sup> Thus, unless California changes the eligibility requirements within its RPS, BC will be hard-pressed to market its hydro power, including potential new sources like Site C, to that state.<sup>24</sup>

With several states setting such environmental standards, there is a strong possibility that the overwhelming majority of BC’s current supply mix might be accepted only by jurisdictions willing to take BC power regardless of whether it meets the definition of “renewable.” To meet RPS requirements, renewable energy is considered to include two elements: the physical electricity and the associated renewable energy certificate (REC). The REC “represents the property rights to the environmental, social, and other non-power qualities of renewable electricity generation.”<sup>25</sup> Producers of renewable electricity are permitted to sell their RECs bundled (i.e., with the electricity) or unbundled. If sold unbundled, the clean energy attributes of that electricity belong to the buyer, but the electricity generated is no longer considered clean or renewable.

The establishment and authentication of RECs in WECC is determined by the Western Renewable Energy Generation Information System (WREGIS), an independent organization that tracks renewable energy generation from WECC members and creates RECs. Each REC has a unique identification number to ensure that the green attributes of the generation source in question are not used by two or more entities (i.e., double counted). Any REC generated in BC and registered by WREGIS can then be used to meet RPS requirements in the WECC states.

BC’s electricity export potential in the RPS market depends on the number of RECs the province can create. Energy generated in BC by qualified renewable energy technologies is accepted by all the WECC states that have adopted RPS, but some of these states permit the use of bundled RECs only to achieve their RPS targets.<sup>26</sup>

Table 1 summarizes the RPS goals of 11 of the WECC states as of May 27, 2010.<sup>27</sup>

Table 1: Renewable portfolio standards (RPS) goals by WECC state

State	RPS Goal	Notes
Arizona	15% by 2025.	REC transfer permitted and counts toward RPS goal. Likely means unbundled RECS will be eligible.
California	33% by 2020.	Specifics of compliance program, including delivery requirements and how much of the portfolio can be met by unbundled RECs, is still under development.
Colorado	Investor-owned utilities: 30% by 2020; Electric cooperatives: 10% by 2020; Municipal utilities serving more than 40,000 customers: 10% by 2020.	Can be met with unbundled RECs.
Idaho	0	
Montana	15% by 2015.	Can be met with bundled RECs only. Geographic eligibility restrictions also apply.
New Mexico	Investor-owned utilities: 20% by 2020; Rural electric cooperatives: 10% by 2020.	Can be met with unbundled RECs generated anywhere in WECC states.
Nevada	25% by 2025.	Portfolio standard is not renewable standard, and can be met with a combination of renewables and efficiency.
Oregon	Large utilities: 25% by 2025; Small utilities: 10% by 2025; Smallest utilities: 5% by 2025.	Can be met with unbundled or bundled RECs. Unbundled RECs can represent only 20% of the largest utilities' renewable portfolio.
Utah	0	Has renewable goal but no standards.
Washington	15% by 2020	To qualify, the resource needs to be located in the Pacific Northwest or electricity generated from a renewable resource delivered into Washington state on a real-time basis without shaping, storage or integration services.
Wyoming	0	

## Potential export market size based on estimated demand and RPS requirements

There are few publicly available studies on the potential market for BC electricity exports. The most detailed one that is available, however, was commissioned by BC Hydro for its 2008 Long Term Acquisition Plan. To project renewable energy demand in 2020, the study combined load growth estimates throughout the US component of WECC with state-level RPS requirements. The results are shown in Table 2.

Table 2: Projected increase in WECC "renewable" electrical energy demand

2020	US WECC			
	Total GWh Sales Forecast	Renewable Goal %	Target GWh	2008 Existing Renewable GWh
ID	29498	0%	0	1759
MT	13979	15%	2097	530
UT	41204	0%	0	661
CO	69031	20%	13806	3319
NV	52764	20%	10553	1627
CA	321679	33%	106154	26344
AZ	98720	10%	9872	172
NM	29751	15%	4463	878
Wy	21941	0%	0	809
WA/OR(1,2)	173226	17.5%	30356	7519
Total	851794		177301	43618

(1) The Existing Renewables for 2008 and total sales for Washington and Oregon are combined together

(2) Average of renewable goal (15% WA and 20% OR)

The projections suggest that total renewable energy demand could reach 177,301 GWh/yr in 2020. Given the 43,618 GWh/yr existing renewable supply calculated for 2008, that leaves a gap in the supply of renewable energy supply of 133,683GWh/yr.<sup>28</sup>

## Competition for the RPS Market

While the projected gap in the WECC states between the estimated supply and demand for renewable energy is substantial, it is only one factor in BC's potential export demand. BC will also be competing with other energy suppliers on both price and quantity, including home state producers who may have formal or informal advantages. The recent recession and subsequent slowing of the economy discussed earlier in the paper gave an indication of this effect, bringing about a reduction in energy prices.<sup>29</sup> The economic slowdown decreased energy prices across North America. In the US, natural gas prices declined by more than 50 percent from 2008 to 2009 while electricity demand decreased by 4.2%.<sup>30</sup> Prices for spot coal in the East and number two fuel oil in New York were also affected by the continental economic conditions as they fell by 40% and 42% respectively. Reductions in primary fuel costs led to lower wholesale electricity prices continent-wide. The combination of lower electric demand and lower fuel costs caused electricity prices to fall. The Federal Energy Regulatory Commission estimates that electricity prices declined by nearly 50% and "the majority of the drop in prices is attributable to the drastic decline in fuel prices."<sup>31</sup>

Low prices for electricity throughout WECC reduces the competitiveness of BC's supply, given both the additional costs of transmission associated with moving electricity southward and the substantial US subsidies now going to domestic wind and solar resources.<sup>32</sup>



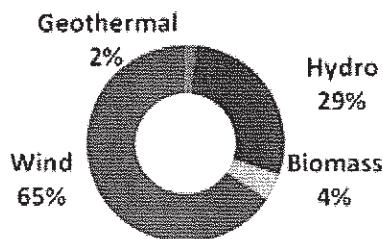
What fraction of the total potential RPS market BC can tap into is highly uncertain. One demand forecast commissioned by the Independent Power Producers of BC (IPPBC) in 2009 suggests that the province could capture 10% of the RPS market, but the rationale for that figure is unclear.<sup>33</sup>

#### 4.3 Available Supply and Transmission Constraints

For BC to be able to access these RPS markets, it must have eligible supply and the transmission capacity to get it to market. As noted earlier, this means that BC needs to generate electricity from eligible green energy projects which have been verified by WREGIS. In 2009, the Western Renewable Energy Zones (WREZ; a joint initiative between the Western Governors Association and the US Department of Energy) estimated that BC had the potential to develop 21,315 MW of renewable capacity, or 66,010 GWh/year of renewable energy (excluding large-scale hydroelectric generation).

The make-up of BC's potential green energy is shown in Figure 4 below. Production of wind energy is by far the most important growth area for renewable energy.<sup>34</sup> The remaining 35% of potential renewable energy capacity is made up of hydro (29%), biomass (4%), and geothermal (2%).

**WREZ Estimation of BC Future Renewable Energy Capacity**



**Figure 4: Estimate of BC's future renewable energy capacity (based on the Western Renewable Energy Zones [WREZ] Phase 1 report).**

British Columbia is limited in the amount of renewable energy it can transmit to California and other WECC states because of constraints on the transmission interties to the US. At present, BC can flow, at most, 3,150 MW to the US, which is equivalent to approximately 27.6 TWh of energy annually if the maximum tie line capacity were to be reached for every hour in a year. In practice, however, the actual transfer capacity is often less than the maximum and can even be reduced to hundreds of megawatts during peak loads. As the IPPBC's 2009 report states, "[I]t is likely that existing transmission infrastructure and interties will need to be upgraded or expanded to better allow for the trade of surplus energy."<sup>35</sup>

The transmission constraint is a fundamental issue. It is also addressed by the BC Green Energy Advisory Task Force which warned that "without new transmission capacity, BC will be unable to deliver significant renewable electricity to customers in California and other states. A new 500-kilovolt line would be a major undertaking, requiring billions [of dollars] in investment and numerous regulatory approvals; the long lead time for transmission (up to 10 years) compounds policy, technological and financial risks."<sup>36</sup>

### In Summary

There is potentially a large market for BC clean energy exports – notably electricity – and it has been estimated that BC has the resources that could enable it to expand supply for that market if it chose to do that. BC will face stiff competition in those markets, and some states currently have restrictive policies that would preclude most of BC’s hydroelectricity in their definitions of “renewable.” At the same time, the province’s domestic demand is also expanding. BC producers will therefore need to expand transmission capacity, especially as competition in export markets from other suppliers grows. Drawing an appropriate balance between the opportunities and risks of expanding electricity exports is therefore a challenging task for BC energy policy-makers.

## 5. KEY CONSIDERATIONS FOR DESIGNING BC’S ELECTRICITY EXPORT POLICY

The BC government’s shifting positions on the objectives of electricity policy and the export question have occurred without much of an opportunity for public debate. The Green Energy Task Force consisted of a variety of stakeholders, but the government released only a summary of the group’s recommendations and did not publicly release either the task force’s final report to government or the submission made by interested parties to the task force. The *Clean Energy Act* was debated in the provincial legislature for several days before passage, but the Opposition focused on high level issues and no section-by-section debate of the provisions of the bill was conducted.

In several of its public pronouncements, the government has set some conditions to guide decisions about whether or not to export power. In its 2009 Speech from the Throne, it suggested, for example, that an export policy should be “principled, economically-viable and environmentally-sustainable.”<sup>37</sup> The Act itself states that the intention of an export policy is that of “benefiting all British Columbians and reducing greenhouse gas emissions in regions in which British Columbia trades electricity while protecting the interests of persons who receive or may receive service in British Columbia.”

While the Act and the communication materials accompanying it support the net export objective, the legislation also requires Cabinet to determine that export opportunities identified in the IRP be “in the interest of British Columbians” before those opportunities are pursued.

And what might making these conditions more specific involve? What would a sound electricity export policy look like? These are the kinds of questions that the FutureGrid forum hosted in June 2010 by the Pacific Institute for Climate Solutions undertook to answer.

### A Public Dialogue

The FutureGrid forum invited participants to engage in a broad dialogue about the opportunities and costs of BC becoming a significant exporter of electrical power. The proceedings were informed by a background paper on electricity trade issues in BC, which identified a range of issues in electricity export policy design. About 100 participants - including utility executives, power producers, policy experts, academic researchers, first nations and NGOs - joined in the facilitated dialogue to discuss the merits of six principles outlined in the background paper:

- Exports must be economically advantageous to consumers, communities, investors, and the provincial government.
- Exports must not jeopardize the reliability of domestic supply.

- Exports must demonstrably contribute to greenhouse gas reductions in importing jurisdictions.
- BC electricity policy must respect First Nations Rights and Title.
- Exports must be based on a planning and approval process designed to foster public legitimacy and promote environmental, social, and economic sustainability in BC.
- Exports must be reversible.

The discussion clearly ratified the importance of the first five of the principles. The sixth one on export reversibility was felt by many participants better addressed under the issue of domestic supply reliability (the second principle). Following that meeting, a much smaller follow-up workshop involving BC Hydro, Independent Power Producers, energy sector analysts and academic researchers was held in August 2010, to develop the (now five) design principles in more detail based on a range of considerations and issues.<sup>38</sup>

The key considerations for policy design, by general principle area, are summarized below and include six recommendations for government.

### 5.1 Ensuring economic advantageousness

Electricity exports should make economic sense. One of the most divisive issues surrounding BC energy policy this decade has been whether private power producers are receiving de facto subsidies from BC ratepayers.<sup>39</sup> This concern has spilled over into the debate around exports. While the government and industry are very optimistic about the electricity export market, others are skeptical about whether BC will be able to produce new power for export markets at a cost that will be competitive.<sup>40</sup> The *Clean Energy Act* has responded to these concerns by protecting ratepayers from the costs of export contracts: the Act prohibits the BCUC recovering from ratepayers the cost of those export expenditures resulting from the IRP. Some customer groups are concerned that the government might increase its share of export revenues. In Quebec, for example, Hydro-Quebec's export sales do not reduce domestic rates: all export profits increase the dividend paid to the Quebec government.

In addition, two limitations affect this provision (leaving aside for now the complexities in implementing it):

- Recall that the *Clean Energy Act* authorizes two distinct channels for electricity exports: one through the IRP process, and one through the self-sufficiency surplus. The ratepayer protection provision applies to the first channel only.
- The provision explicitly protects ratepayers, but not taxpayers. It leaves open the possibility that the government might subsidize export development.

In our view, the government could work around both of these limitations by specifying, through regulation, that it will only authorize export development if there are net economic benefits to the province. In 1993, the electricity export policy of the government of the day did just that, declaring that its objective for long-term electricity exports was “maximizing net provincial benefits.” It stated, “In order to avoid financial risks falling on those who do not have a direct involvement in export sales, no export project will be subsidized by the province or by domestic ratepayers.”<sup>41</sup> We believe that standard remains good public policy.



The open discussion about economic justifications for electricity exports produced two other suggestions: (1) that a type of “full cost accounting” that considers a full range of economic, environmental and social values be performed as part of examining the benefits and costs of exports; and (2) that local communities affected by development of the resource be engaged in discussing and planning for the economic and other benefits that new energy projects can afford.

**Recommendation #1:** The government should ensure that all electricity exports will yield net benefits to the province across the full range of economic, environmental and social values. To that end, the government should establish regulations that set clear net-benefit tests for all long-term export contracts.

**Recommendation #2:** The government should consider instituting mechanisms for revenue-sharing with local communities affected by large new energy development projects.

### 5.2 Safeguarding the reliability of domestic supply

Arguably the most important principle of electricity operations is the reliability of supply: everyone wants power available when it is needed. In order to ensure reliability, provincial energy planners will need to be certain that any export contracts will not undermine the ability of BC Hydro to meet its own customers’ needs. The province therefore must be confident that it will have a reliable surplus of energy over what is necessary to meet domestic demand.

This means that several significant uncertainties need to be managed. One is the seasonal and annual hydrological flows that influence the capacity of the province’s hydroelectric power. Another is the potential of demand-side management, which to date BC Hydro is successfully implementing. Although BC Hydro is confident it can meet more than 70% of new demand with conservation and efficiency, in our view that is a tall order and the province will need a contingency plan in case demand-side management is not as successful as planned. Another major uncertainty is the implication that broad societal fuel-switching to electricity from carbon-based fuels (gasoline and diesel in transportation; natural gas in heating) will have. BC needs to be confident that the province will have a reliable surplus even after accounting for the increased electricity demand expected to occur as fuel-switching increases to meet GHG reduction targets.

This reliability issue is tied directly to the economic issue. If unforeseen demand arises in BC, or something happens to existing sources of supply, the province might want to redirect power destined for export to the domestic market. One option would be to build this type of flexibility into export contracts. The disadvantage of that, however, is that there is a trade-off between the flexibility of a contract and the price it can command. Power planners are less concerned about the risk of insufficient power for domestic needs because they are confident they can purchase needed power on the “spot market.” They see the issue not as one of physical reliability but as one of financial risk because they may need to pay more on the spot market than they planned for. There are also environmental risks tied to reliability of supply: unexpected reliance on the spot market could result in the province increasing its consumption of electricity from GHG-emitting fuels.

All of these risks are more easily managed if the fraction of BC electricity supply dedicated to the export market remains modest. The *Clean Energy Act* provides no guidance on this issue, but the government could easily do so through policy or implementing regulations.

Recommendation #3: The government should ensure that electricity exports do not jeopardize the reliability of domestic supply by providing guidance on setting upper limits on the proportion of BC electricity that can be dedicated to the export market – whether through the integrated resource plan channel or the self-sufficiency surplus channel.

### 5.3 Contributing to greenhouse gas reductions in importing jurisdictions

Participants at the open discussion widely agreed that if BC was going to be exporting clean energy, it should ensure that the activity contributes to the reduction or mitigation of GHG emissions in importing jurisdictions.

Developing policies to do that will be a significant challenge, however. Our discussions revealed widely divergent views on this issue. One view is that clean power exports automatically contribute to GHG reductions because, by definition, they displace the possibility of the importing jurisdiction using polluting sources of energy to meet the same need. From this perspective, it would not be necessary to tie any environmental policy preconditions to electricity exports.

The opposing view is that without rigorous climate or energy conservation policies, importing jurisdictions may simply take BC clean power but continue to increase their use of carbon-emitting sources, such that BC's electricity exports would affect no meaningful contribution to GHG reduction. From this perspective, it would be imperative for BC to export clean energy only to jurisdictions that have climate or renewable energy policies in place. Other options suggested include: issuing export contracts only when the importing jurisdiction is purchasing certified renewable energy certificates (RECs) or GHG offsets; making exports conditional on the importing jurisdiction gaining membership in an international entity such as the Western Climate Initiative; and pursuing export contracts only with jurisdictions with which the province has a formal intergovernmental agreement stipulating that BC exports will displace more greenhouse gas intensive energy sources. After considerable discussion, the following recommendation received the most widespread agreement.

Recommendation #4: Before undertaking any electricity export contract, the government should satisfy itself that the importing jurisdiction has meaningful demand-side management in place.

### 5.4 Respecting First Nations rights and title

The Canadian Constitution, as interpreted by the Supreme Court of Canada, places a duty on all provincial and territorial governments to consult and accommodate First Nations when making decisions on resource development in their traditional territories. Given that both electrical generation and transmission involve having access to and across broad regions of the province, First Nations concerns relating to aboriginal and treaty rights must be addressed in land use planning and government authorizations that impact such rights and claims. A recent decision by the Supreme Court of Canada respecting BC Hydro, the BC Utilities Commission and the Energy Purchase Agreement with Rio Tinto Alcan confirms that energy decision-makers in BC Hydro and the government must meet their constitutional obligations to "consult and accommodate First Nations" when carrying out conduct on behalf of the Crown that will have impacts on the ground and potentially adversely affect aboriginal and treaty rights and claims.<sup>42</sup>

There was consensus among participants in the open discussion that this concern was vital, but that energy projects for export raised no unique issues related to First Nations rights and title beyond those raised for energy projects for domestic use.

### 5.5 Fostering public legitimacy and promoting sustainability

One of the most persistent concerns among environmental critics of the provincial government's energy policy is that the planning and approval process for new resource projects was not sufficiently rigorous or well coordinated. These criticisms about process are directed at three levels:

- the individual project level – most individual projects are required to go through a provincial or federal environmental assessment process, but stakeholders seriously question the rigour of this process.
- the regional level – concerns have been raised about the absence of a regional scale planning process that could, among other things, establish thresholds for cumulative effects of multiple resource developments in the same area.
- the province-wide level – there is concern that BC lacks a coordinated mechanism with which to evaluate the best way to meet the province's energy needs at the least social, environmental, and economic cost.<sup>43</sup>

The *Clean Energy Act* proposes some changes to the planning and approval process, but the legislation has not addressed critics' most significant concerns with the process. The Act clarifies that BC environmental assessments can address cumulative impacts (a legal requirement that already existed), but many stakeholders are concerned that project-specific assessments are an inherently limited approach to addressing cumulative effects. The new Act does nothing to address the middle, regional level that many feel is the critical level at which to examine the environmental sustainability of new energy projects. The Act does authorize a new provincial process for long-term planning: the "long-term acquisition plan" reviewed by the BCUC has been eliminated and replaced with the new IRP to be developed by BC Hydro and approved directly by Cabinet. The Act does not establish a consultation process, but does provide for the government to develop a regulation for this purpose.

Discussions at the forum of electricity exports highlighted the need for a transparent, inclusive, meaningful, timely, and comprehensive planning process for BC's electricity export initiative. Energy planning is a challenging political enterprise largely because impacts are separate from benefits in many cases. For example, the impacts of the resource development (say, construction of a new hydro facility or transmission line) are felt locally, while the energy produced is frequently delivered to distant markets. Having a legitimate planning process can help those who are negatively affected see the wider benefits.

Shifting the provincial objective from self-sufficiency to net exports significantly increases this political challenge. Now, rather than hoping that local communities will tolerate the development of local resources for the needs of the broader provincial community, the justification shifts to hoping that local communities will tolerate resource development to supply even more distant markets outside the province.<sup>44</sup>

The fact that developing new electricity supplies for export will also come with environmental and social impacts, it is particularly important that a rigorous planning and approval process be in place that fosters the legitimacy of decision-making.

Recommendation #5: The government should ensure that all electricity exports are based on a planning and approval process that fosters public legitimacy and promotes environmental, social, and economic sustainability in BC.

Recommendation #6: The government should supplement province-wide long-term energy planning with a regional energy planning process to address the cumulative effects of multiple projects in the same region.

## 6. CONCLUSIONS

Expanded electricity exporting by BC could contribute substantially to provincial economic development while also reducing greenhouse gas emissions in importing jurisdictions. Yet, the prospect poses significant economic, environmental and social risks.

While the government has declared its objective of seeing BC become a major net exporter of electricity, it has done so with insufficient public consultation, amidst much opposition, and in the face of considerable economic uncertainty.

We believe that the government could address many of these concerns by articulating clear and comprehensive terms and conditions, in policy and regulations, to govern how electricity exports will be developed and managed in future.

### Summary of Recommendations

1. The government should ensure that all electricity exports will yield net benefits to the province across the full range of economic, environmental and social values. To that end, the government should establish regulations that set clear net-benefit tests for all long-term export contracts.
2. The government should consider instituting mechanisms for revenue-sharing with local communities affected by large new energy development projects.
3. The government should ensure that electricity exports do not jeopardize the reliability of domestic supply by providing guidance on setting upper limits on the proportion of BC electricity that can be dedicated to the export market – whether through the integrated resource plan channel or the self-sufficiency surplus channel.
4. Before undertaking any electricity export contract, the government should satisfy itself that the importing jurisdiction has meaningful demand-side management in place.
5. The government should ensure that all electricity exports are based on a planning and approval process that fosters public legitimacy and promotes environmental, social, and economic sustainability in BC.
6. The government should supplement province-wide long-term energy planning with a regional energy planning process to address the cumulative effects of multiple projects in the same region.

## ENDNOTES

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26. If BC sells unbundled RECs to their WECC customers then there may be difficulties in meeting the province's own 93% renewable energy standard.
27. We have focused here only on the US omitting Alberta because of its undefined RPS and Baja California and Texas as only a portion of these two regions is part of the WECC. The data is from the US Department of Energy, Office of Energy Efficiency, Database of State Incentives for Renewables and Efficiency.
28. BC Hydro, (2008) *Long Term Acquisition Plan: Appendix H Global Energy's Renewable Energy Market Analysis Report*, 2008, p. 18. <http://www.llbc.leg.bc.ca/public/pubdocs/bcdocs/441362/index.htm> (accessed August 2, 2010).
29. Federal Energy Regulatory Commission (2010), *State of the Markets Report 2009*, Item No: A-3, April 15, 2010 accessed from <http://www.ferc.gov/market-oversight/st-mkt-ovr/som-rpt-2009.pdf>
30. Ibid, p. 5.
31. Ibid, p. 7.
32. Government of British Columbia, *Green Energy Advisory Task Force Report*. April 28, 2010, p. 4. <http://www.empr.gov.bc.ca/EAED/Documents/GreenEnergyAdvisoryTaskForce.pdf> (accessed August 5, 2010).
33. Independent Power Producers of BC, *Economic Impact Analysis of Independent Power Projects in British Columbia*, prepared by PriceWaterhouseCoopers, 2009, p. 12. [http://www.ippbc.com/EN/latest\\_updates/release\\_of\\_economic\\_impact\\_analysis\\_of\\_independent\\_power\\_projects\\_in\\_british\\_columbia\\_-\\_pricewaterhousecoopers/](http://www.ippbc.com/EN/latest_updates/release_of_economic_impact_analysis_of_independent_power_projects_in_british_columbia_-_pricewaterhousecoopers/) (accessed August 2, 2010).
34. However, to date, there has only been one commercial development of wind energy; a 102 MW wind park on Bear Mountain in northeast BC. The Dokie Wind Project is under construction and five wind projects totalling 434 MW were selected in the 2008 Clean Power Call.
35. Independent Power Producers of BC, *Economic Impact Analysis of Independent Power Projects in British Columbia*, prepared by PriceWaterhouseCoopers, 2009, p. 34. [http://www.ippbc.com/EN/latest\\_updates/release\\_of\\_economic\\_impact\\_analysis\\_of\\_independent\\_power\\_projects\\_in\\_british\\_columbia\\_-\\_pricewaterhousecoopers/](http://www.ippbc.com/EN/latest_updates/release_of_economic_impact_analysis_of_independent_power_projects_in_british_columbia_-_pricewaterhousecoopers/) (accessed August 2, 2010).
36. Given the significance of this transmission issue, whether or not RECs can be unbundled is highly significant. It is for that reason that a great deal of attention is being focussed on the California Public Utility Commission's (CPUC) decision to allow or disallow the use of unbundled RECs. Without the necessity of transmitting the physical energy, British Columbia will be able to gain economically from the production of green energy without upgrading and expanding transmission and intertie infrastructure. In March of 2010, the CPUC authorized the use of unbundled RECs to meet California's RPS standards. However in May of 2010 the CPUC commissioners voted to stay the decision on the use of unbundled REC's. The matter continues to be under advisement (CPUC 2010).

37. Speech from the Throne, The Honourable Steven L. Point, OBC, Xwě lī qwě l tēl, Lieutenant-Governor. At the Opening of the First Session, Thirty-Ninth Parliament of the Province of British Columbia, August 25, 2009 <http://www.leg.bc.ca/39th1st/4-8-39-1.htm>.
38. The participants in the workshop were Paul Kariya, Clean Energy BC; Josh Paterson, West Coast Environmental Law; Cam Mathenson and Rohan Solesby, BC Hydro; Resja Campfens and Sara Mitchell, Sea Breeze Power Corporation; Scott Brown, PWC.
39. This is a major theme of Calvert, *Liquid Gold*.
40. For example, Marvin Shaffer, "Clean Energy Act will cost British Columbians," *Vancouver Sun*, June 14, 2010, p. A9.
41. Ministry of Energy, Mines, and Petroleum Resources, *Electricity Export Policy: Long-term Firm Exports*, July 12, 1993.
42. *Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council*, 2010 SCC 43. Available at <http://csc.lexum.umontreal.ca/en/2010/2010scc43/2010scc43.html>.
43. Matt Horne, *Pembina Institute Assessment of the B.C. Clean Energy Act*, May 5, 2010. <http://pubs.pembina.org/reports/pembina-assessment-of-the-clean-energy-act-final.pdf> (accessed May 17, 2010); West Coast Environmental Law, *Bill 17 – Clean Energy Act: Improvement needed to ensure a credible planning process* <http://wcel.org/sites/default/files/publications/Bill%2017%20-%20Clean%20Energy%20Act%20Backgrounder.pdf> (accessed May 31, 2010).
44. The fact that these projects will be developed for private profit accentuates the opposition for many.

## ACKNOWLEDGMENTS

Gerard MacDonald was critical to presenting the data on trade trends. Stephanie Taylor provided research assistance. We would like to thank the following individuals for helpful comments on an earlier draft: Bob Elton, Jock Finlayson, Thomas Hackney, Matt Horne, Mark Jaccard, Paul Kariya, Nancy Olewiler, Josh Paterson, Lawrence Pitt, Marvin Shaffer, Kekinusuqs Judith Sayers, and Kara Shaw. In addition, staff from the BC Ministry of Energy, BC Hydro, and Powerex commented on the draft report. Any remaining errors and all interpretation are the sole responsibility of the authors.



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**Firth, Janet MEM:EX**

MINISTRY OF ENERGY AND MINES <b>RECEIVED</b> APR 08 2011 DEPUTY MINISTER'S OFFICE LOG# <u>58436</u>
---

**From:** Minister, EMH EMH:EX  
**Sent:** Friday, April 8, 2011 2:52 PM  
**To:** MEM Correspondence EM:EX  
**Subject:** DRAFT REPLY- NEW MAIL- FW: Review of BC Hydro

**From:** s.22  
**Sent:** Friday, April 8, 2011 12:39 PM  
**To:** Minister, ENER ENER:EX  
**Cc:** Simons.MLA, Nicholas LASS:EX  
**Subject:** Review of BC Hydro

Dear honorable Minister Coleman, It is commendable that you are having a panel review of BC Hydro's books to determine if B.C. Hydro's proposed rate hikes can be trimmed.

This is in the interests of the people of British Columbia.

However, I am wondering why the B.C. Utilities Commission is not part of this panel as they have the most experience with such matters and are an independent body.

Further to that, will you, as Energy Minister propose that the powers of the BCUC in ALL matters relating to energy, be reinstated immediately?

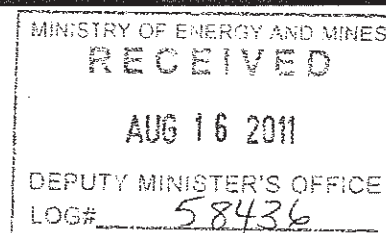
I am very concerned that Premier Campbell passed Legislation to limit the BCUC's powers to protect the public interest.

Yours respectfully,

s.22

**Ferguson, Susan M MEM:EX**

**From:** Minister, EMH EMH:EX  
**Sent:** Tuesday, August 16, 2011 9:38 AM  
**To:** MEM Correspondence EM:EX  
**Subject:** FW: B.C. Hydro Review



Draft reply

**From:** s.22  
**Sent:** Monday, August 15, 2011 3:10 PM  
**To:** OfficeofthePremier, Office PREM:EX; Minister, ENV ENV:EX; Minister, EMH EMH:EX  
**Cc:** Simons.MLA, Nicholas LASS:EX; 'Adrian Dix for BC'  
**Subject:** B.C. Hydro Review

Dear Premier Clark and honorable ministers,

I have been observing with interest the recent dialogue prompted by the review of B.C. Hydro. I am glad that some of the problems are being discussed openly so that the shareholders of B.C. Hydro (the tax payers of B.C.) can become more informed on the situation.

I have written before to urge you to reinstate the full powers of the B.C. Utilities commission. The current restrictions on the BCUC are not fair to the public interest.

The other elephants in the room on this issue are: The Clean Energy Act (and over exaggerated self sufficiency targets), Independent Power projects and their costly contracts, the proposed \$8 billion Site C dam, and the 1 Billion dollar Smart Meter Program.

These are all questionable policies/expenditures and in view of the current situation with the finances of B.C. Hydro, I think it is imperative that money be made available to upgrade and maintain existing hydro dams. This is the most important thing.

The money needed can only come from shelving questionable projects and doing what's best for B.C. families and the rest of the public (who don't fit the definition of "family") ,to fulfill our energy needs for the future (with a big emphasis on conservation).

I hope you will consider these options, and I would appreciate a response from each of you.

Yours sincerely,

s.22



s.22

March 31, 2011

Honourable Rich Coleman,  
Minster of Energy and Mines  
Government of British Columbia,  
PO Box 9060, Stn. Prov Govt  
Victoria, BC  
V8W 9E3

<b>MINISTER OF ENERGY</b>			
REFERRAL NUMBER:	58449		
REFER TO:			
DRAFT REPLY <input checked="" type="checkbox"/>	INFO <input type="checkbox"/>	FILE <input type="checkbox"/>	TOSS <input type="checkbox"/>
RECEIVED	'APR 8 2011		
REMARKS:			

RE: BC Hydro Rate Review

Dear Mr. Minster,

I understand that you have determined to review the rates being proposed by BC Hydro.

I would like to identify one major inequity that has been in place since the Tier 1 and Tier 2 rate structure was introduced,. I have attempted to address my concern to Public Utilities Commission but was told I was "too late".

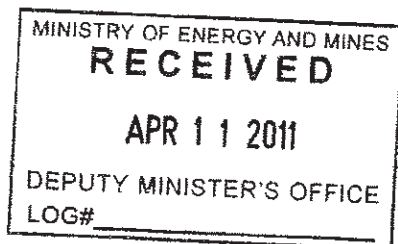
The tiered rate structure does not take into account those who heat their home with electricity. There is no allowance for the additional electricity needed by a home heated with electricity. As a result, homes that are electrically heated, s.22 end up paying Tier 2 rate on much of the electricity needed to heat over the winter.

Our home was built in 1992, using the CMHC standards of the day. Electric heating was chosen at that time because BC Hydro was advertising "clean, safe, economical heating with electricity". Now, years later, we have to pay a premium for that heat.

I humbly request that, as a part of the review, an additional increment of Tier 1 electricity be allowed for those homes who have electric heat.

Yours sincerely,

s.22



**Firth, Janet MEM:EX**

**From:** Minister, EMH EMH:EX  
**Sent:** Thursday, April 28, 2011 11:17 AM  
**To:** MEM Correspondence EM:EX  
**Subject:** DRAFT REPLY- NEW MAIL-FW: B.C. Hydro Review

MINISTRY OF ENERGY AND MINES <b>RECEIVED</b>  MAY 02 2011 DEPUTY MINISTER'S OFFICE LOG# 58680
--

**From:** OfficeofthePremier, Office PREM:EX  
**Sent:** Wednesday, April 27, 2011 2:52 PM  
**To:** s.22  
**Cc:** Minister, EMH EMH:EX  
**Subject:** RE: B.C. Hydro Review

Thank you for your emails regarding government's review of BC Hydro's business plan.

We appreciate the time that you have taken to share your thoughts with us as they relate to the hiring of retired employees on contract. Your email has been forwarded to the Honourable Rich Coleman, Minister of Energy and Mines. We have asked Minister Coleman to ensure that you receive a response that addresses your concerns directly. You will be hearing from Minister Coleman, or his designate, in this regard in due course.

Again, thank you for taking the time to write.

pc: Honourable Rich Coleman

**From:** s.22  
**Sent:** Sunday, April 24, 2011 3:01 PM  
**To:** OfficeofthePremier, Office PREM:EX  
**Subject:** FW: B.C. Hydro Review

This is my third and last attempt to make contact with Premier Clark's office. My original emails via christyclark.ca have not been answered.

Please follow my simple thread below concerning the upcoming B.C. Hydro review.

I appreciate Premier Clark can't reply in person. Nor do I expect her to even read this email.

I do, however, expect a reply from a senior official working on the B.C. Hydro review. By now I believe I've earned it.

---

**From:** s.22  
**To:** [christy@christyclark.ca](mailto:christy@christyclark.ca)  
**Subject:** B.C. Hydro Review  
**Date:** Tue, 12 Apr 2011 16:34:06 +0000

I'm resending the April 7, 2011 message I forwarded using the christyclark.ca contact page. I haven't heard back and would appreciate the courtesy of a reply.

---

I just read the terms of reference for the upcoming B.C. Hydro review. Please consider the elimination of double dipping as a cost containment strategy. Taking on employees as contractors after they have retired stifles the growth of younger talent, eliminates hiring opportunities and increases operational costs.

Kindly let me know this suggestion has been read and passed on to Minister Coleman.

Thank you.

Drafted by: Sue Bonnyman, Dir, GRB ✓  
Approved by: Derek Griffin, Exec. Director ✓  
Les MacLaren, ADM, EAED ✓  
G. Cho, TACRD – CS\_✓  
S. Carr, DM\_✓  
CLIFF NO.: 58680

s.22

Email: s.22

pc: Premier@gov.bc.ca

bpc: Chris.Brown@gov.bc.ca

Dear s.22 :

Honourable Christy Clark, Premier, has forwarded me a copy of your April 24, 2011 email regarding the current review of BC Hydro. As Minister of Energy and Mines, I am pleased to respond.

The objective of the BC Hydro review is to provide recommendations and options to ensure costs are minimized and benefits to British Columbian families and BC Hydro customers are maximized. I note in your email your suggestion that hiring retired former employees as contractors stifles growth of younger talent, eliminates hiring opportunities and increases operational costs.

I will ensure the BC Hydro Review Panel is aware of your suggestion. Thank you, again, for writing.

Sincerely yours,

Rich Coleman  
Minister of Energy and Mines

s.22

Email: s.22

pc: Premier@gov.bc.ca

bpc: Chris.Brown@gov.bc.ca

Dear s.22

Honourable Christy Clark, Premier, has forwarded me a copy of your April 24, 2011 email regarding the provincial government's review of BC Hydro. As Minister of Energy and Mines, I am pleased to respond.

The objective of the BC Hydro review is to provide recommendations and options to ensure costs are minimized and benefits to British Columbian families and BC Hydro customers are maximized. I note in your email your suggestion that hiring retired former employees as contractors stifles growth of younger talent, eliminates hiring opportunities and increases operational costs.

I will ensure the BC Hydro Review Panel is aware of your suggestion. Thank you for writing.

Sincerely yours,

Rich Coleman  
Minister of Energy and Mines

**Ferguson, Susan M MEM:EX**

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**From:** s.22  
**Sent:** Sunday, July 10, 2011 10:54 AM  
**To:** Coleman.MLA, Rich LASS:EX  
**Subject:** BC Hydro Review and "Taking a Company Green"  
**Attachments:** s.22

Mr. Coleman,

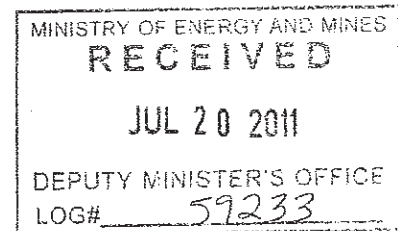
In light of recent developments in Ontario to move forward on cooperative power generation systems in the greenhouse industry (see below) and your recently reported review of BC Hydro, I would encourage you to check out a profile on s.22 in a recent blog by John Bell.

<http://www.ceoafterlife.blogspot.com/>

June 28, 2011 – The Ontario Greenhouse Alliance (TOGA) is hosting a pair of information sessions next month on how greenhouse operators may be able to implement cogeneration systems as a result of changes recently announced to the Combined Heat and Power Standard Offer Program (CHPSOP).

Sincerely,

s.22







Line Contractors Association of BC

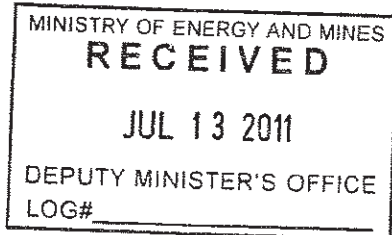


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C. 604.889.4622

jeff@lca.ca  
www.lca.ca

**Jeff Skosnik, PhD**  
Chief Executive Officer

Suite 302-20338 65 Ave  
Langley, BC V2Y 2X3



Line Contractors Association of BC

REFER TO:			
DRAFT REPLY	<input checked="" type="checkbox"/>	INFO	<input type="checkbox"/>
FILE	<input type="checkbox"/>	TOSS	<input type="checkbox"/>
RECEIVED	JUN 09 2011		
REMARKS:	59140		

**For the Honourable Rich  
Coleman,  
Minister of Energy and  
Mines**



Suite 302-20338 65 Avenue  
Langley, BC V2Y 2X3

T: 604.534.2226

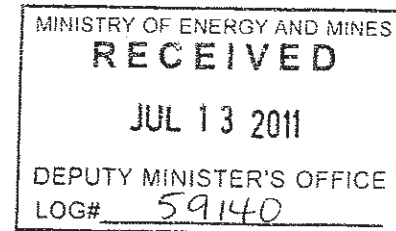
F: 604.533.2344

Email: [info@lca.ca](mailto:info@lca.ca)

[www.lca.ca](http://www.lca.ca)

9 June 2011

The Honourable Rich Coleman  
Minister of Energy and Mines  
#130-7888 200th Street  
Langley, BC V2Y 3J4



Dear Minister Coleman,

The Line Contractors Association of BC (LCA) applauds your decision to review BC Hydro with a view to ensuring that BC Hydro provides reliable electrical service to British Columbia families at the lowest possible cost. In the LCA's judgment, one major issue that may interfere with achieving that goal is BC Hydro's relationship with the private sector.

As measured by BC Hydro's own supplier/contractor survey conducted late last year, the private sector has major issues with BC Hydro. Contractors have identified BC Hydro practices that unnecessarily increase the cost of providing private sector services to BC Hydro by 15 to 25 percent, compared to the cost of providing similar services to non-BC Hydro customers. These costs are an unnecessary burden to ratepayers.

BC Hydro has falsely claimed that its excessive overtime is not an incremental cost factor for ratepayers. This claim is obviously false for multiple reasons, including the well-documented fact that high levels of overtime in the construction trades are correlated to significant reductions in productivity and safety: workers do more work per hour and do it more safely when they are working normal, straight-time shifts than when they are performing that work under overtime conditions.

By BC Hydro's own admission:

"BC Hydro's performance in terms of severity and number of fatalities ranks among the worst, or the worst when compared with other Canadian electrical utilities".

BC Hydro even permitted one of its workers to perform more than 2000 hours of overtime work in one year! No sane person would believe that this was either safe or productive, a fact which points to serious senior management problems at BC Hydro and the lack of proper policies governing the use of overtime by mid-level managers. The LCA acknowledges that BC Hydro is working on this issue, as it has been for more than twenty years now.

BC Hydro has also falsely claimed that it is cheaper for BC Hydro to perform construction work *at public sector overtime labour rates* (200%) than it is for the private sector to perform that work *at private sector straight-time rates*. This view completely contradicts most modern economic theory, which holds that the private sector is more efficient than the public sector because it is subject to the competitive forces of the

marketplace. Anyone claiming that the public sector at double time rates is more cost-effective than the private sector at straight-time rates would certainly need some compelling evidence to persuade others that this is so. In defense of what is frankly a ridiculous claim, BC Hydro simply closes the door on any public scrutiny of its dubious claims, informing the Utility Commission:

"Cost-effectiveness was brought up during the F09/F10 RRA hearing in the context of management decision making at BC Hydro, and as such, there was no consideration given to the concept of independent verification of the decisions."

When BC Hydro's policy decisions have major, negative implications for the private sector, the LCA feels **it is right to demand proof and transparency**. In the absence of such proof, the LCA sees only wasteful, public sector empire-building, to the detriment of ratepayers and the private sector.

The LCA specifically wants to know therefore whether this government shares BC Hydro's view that the public sector working overtime with reduced rest and safety is more cost-effective than the private sector working straight-time. The LCA specifically asks the government either to prove BC Hydro's claim using objectively verifiable data, or to withdraw the claim on behalf of its unwilling crown corporation.

Before you called for the review of BC Hydro, the LCA was writing a report that it intended to submit to you regarding the issues spoken to in this letter. This report, called "The Red Flag Report", was completed around the time you announced the BC Hydro review.

Once the BC Hydro review was announced, however, the LCA decided to write a broader report than the one it had prepared, one that would be better aligned with the more general goals of the government's review. So, the LCA drafted a second report, called "The White Paper Report".

Upon reflection, the LCA feels that both reports are quite relevant to the government review. Therefore, it is submitting both reports as input into the government's BC Hydro review.

The LCA understands that your review process is nearing completion. The LCA believes that the process should not be allowed to complete before taking into consideration the private sector's input. The private sector has major issues with how BC Hydro operates and with what it says about the cost-effectiveness of the private sector compared to its own cost effectiveness. The LCA contends that these issues should be resolved as part of your review because they bear directly upon the cost of electrical service to ratepayers.

The LCA notes that BC Hydro's systemic overtime has BC Hydro employees working hundreds of hours of overtime every year, while the private sector has a readily available, under-utilized work force. Not only is this excessive overtime unsafe and counter-productive, it is also contrary to the government's focus on families, since in many cases this unnecessary overtime substantially reduces family time and contributes to family stress.

According to the recent RBC Housing Report:

"An average Vancouver household (that is a family of usually two income earners, not a single person) spends over 70 cents of every pre-tax dollar they earn on house ownership costs. Deduct unavoidable taxes, and this amount would rise to nearly 100 percent of an average household income in Vancouver- An average Toronto and Montreal household spends over 57 and 47 of their pre-tax income on house ownership costs, or nearly 80 and 70 percent of their after-tax income respectively."

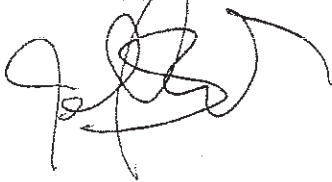
In this housing market, a sharp rise in electricity costs could mean losing the family home for some Vancouver families, especially young home owners with child care costs. The LCA firmly believes that, by out-sourcing BC Hydro's construction work to the private sector, BC Hydro's proposed rate increase can be reduced and money can be saved for BC families. This is an option that needs to be explored with the private sector before the government concludes its review of BC Hydro.

Please acknowledge receipt of this letter and its attached documents. Please also indicate whether these reports, and their recommendations, will be taken into consideration as part of the government's review of BC Hydro. In particular, the LCA wishes to know whether the government will be acting upon the LCA's recommendations concerning truthfulness, transparency, and respect for BC Utility Commission Decisions.

In closing, the LCA is firmly on the side of the government with respect to its energy policies. The LCA hopes to be an important part of the solution to control BC Hydro rates, while delivering on the government's various green initiatives in the most cost-effective manner for British Columbians.

Thank you.

Sincerely yours,



Jeff Skosnik, PhD, CEO

CCs:

1. Robin Lucas, LCA President
2. Deborah Cahill, Electrical Contractors Association of BC (ECA) President
3. Warren Brazier, Clark Wilson, LPP
4. Christy Clark, Premier
5. John Dyble, Deputy Minister to the Premier
6. Peter Milburn, Deputy Minister of Finance
7. Cheryl Wenezenki-Yolland, Associate Deputy Minister of the Environmental Assessment Office

Attachments:

1. ECA Support Letter
2. Two Page Summary for the Premier and Minister
3. LCA Red Flag Report
4. LCA White Paper

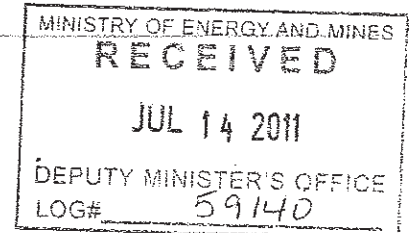
**Ferguson, Susan M MEM:EX**

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**From:** Minister, EMH EMH:EX  
**Sent:** Wednesday, July 13, 2011 8:55 AM  
**To:** MEM Correspondence EM:EX  
**Subject:** DRAFT REPLY- NEW MAIL-FW: Follow up to LCA Submission to BC Hydro

DRAFT REPLY- NEW MAIL

**From:** Coleman, MLA, Rich [mailto:Rich.Coleman.MLA@leg.bc.ca]  
**Sent:** Tuesday, June 28, 2011 12:01 PM  
**To:** Minister, EMH EMH:EX  
**Subject:** FW: Follow up to LCA Submission to BC Hydro



**From:** s.22 | **On Behalf Of** Jeff Skosnik  
**Sent:** June-21-11 8:01 AM  
**To:** Coleman, MLA, Rich  
**Subject:** Follow up to LCA Submission to BC Hydro

Dear Mr Coleman,

On Thursday 9 June 2011, I delivered to your office in Victoria some material that the Line Contractors Association of BC wishes the government to take into consideration in its BC Hydro Review.

I would very much appreciate knowing whether the government will in fact will be taking this material into consideration as part of its efforts to maximize the value of BC Hydro to ratepayers and BC families.

I believe very strongly that, in its review of BC Hydro, it is important for the government to receive input from the private sector on how best to manage BC Hydro, particularly since the private sector is an essential part of the services provided to BC Hydro ratepayers.

Thank you.

Jeff Skosnik, PhD, CEO

**Line Contractors Association of BC**

Suite 302  
20338 - 65th Ave  
Langley BC V2Y 2X3

**Office Telephone**

604 534 2226

**Fax**

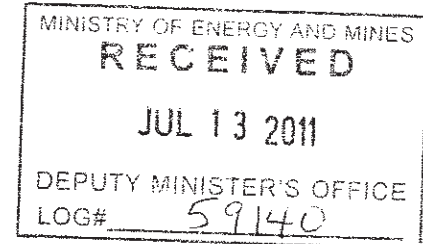
604 533 2344



Electrical Contractors Association of British Columbia

June 7, 2011

Honourable Rich Coleman  
Minister of Energy and Mines  
#130-7888 200th Street  
Langley, BC V2Y 3J4



Dear Minister Coleman,

Re: The Line Contractors Association of BC's (LCA) White Paper Report on BC Hydro

The Electrical Contractors Association of BC (ECABC) was founded in 1952. The ECABC contractor membership consists of union affiliated contractors, open shop contractors, manufacturers and distributors. The ECABC has a total of 154 members, whose businesses operate in every community of our province.

I have reviewed the LCA's White Paper. The ECABC shares the concerns expressed in this Report and supports its recommendations.

The ECABC strongly believes that the government should take this Report into consideration as part of its review of BC Hydro.

Thank you,

Deborah Cahill, President  
Electrical Contractors Association of BC



## **Summary: Public Sector Growth at the Expense of the Private Sector**

BC Hydro, as a provincially owned crown corporation, has a natural electrical service monopoly over approximately 94% of British Columbia residential, commercial, and industrial users. For decades, the utility has planned, operated, maintained, and often constructed the facilities necessary to provide electrical service and, apart from very large capital projects, has used highly paid public sector employees to perform the lion's share of this work. The decisions that have led to the creation of this public sector construction workforce for the most part have been opaque, frequently shrouded in secrecy, and often in stark contrast to the stated provincial policy of promoting the economic development of BC through the enablement and support of the private sector jobs. In fact, public sector jobs have been created over and over at the expense of the private tax-paying sector, reducing the economic output of private contractors and in the process creating hundreds of jobs in the crown corporation.

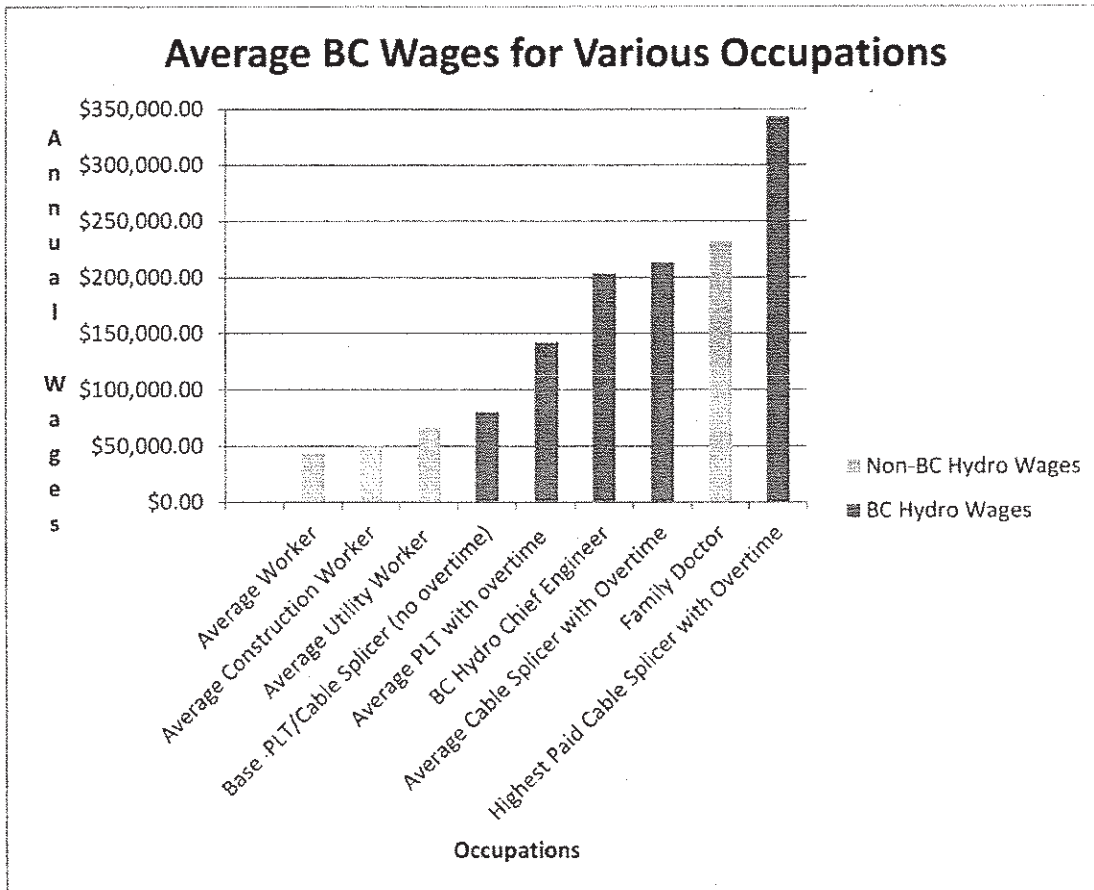
Public employee overtime has remained unchecked, even while skilled contractor employees are unemployed, with no recourse available in the private sector due to the monopoly position held by BC Hydro. BC Hydro executive staff have repeatedly made unfounded assertions about the cost effectiveness of BC Hydro, while they offer conflicting statements about the source and basis for its assertions. BC Hydro employment has increased by almost 40% through the last decade, and collective salaries have increased by more than 70%. Many other North American utilities have evaluated, and then reaped, the benefits of construction and maintenance outsourcing, leaving BC Hydro as one of the last bastions of public sector construction work, to the detriment of ratepayers.

## **Key Issues: Public Sector raises Wages to attract Private Sector Workers**

1. BC Hydro says, "We are not targeting power line technicians working for contractors, and we do not make offers of guaranteed overtime to recruit workers from contractors." This claim is not true. As the *Vancouver Sun* reported on December 20<sup>th</sup>, 2008, BC Hydro made a voluntary increase to the wages of its workers in order to reduce private sector contractor work and to "attract" skilled labour to the public sector. Furthermore, 98% of BC Hydro's power line technicians receive overtime year after year. This is an implied but real promise of overtime for those who want it, and is a known part of every employment offer BC Hydro makes.
2. 77% of BC Hydro's power line technicians receive more in annual overtime than the average BC worker receives as his or her entire wages for the entire year!
3. In testimony to the BC Utilities Commission, BC Hydro has used misleading information to create the illusion that BC Hydro is more cost effective at double time public sector rates than the private sector at straight time rates. When pressed, BC Hydro acknowledged that its claim of superior cost effectiveness cannot be objectively verified. But it refuses to withdraw the claim. The claim is in direct and blatant conflict with BC Hydro's own 2005 commissioned report that showed low internal productivity rates.
4. BC Hydro employee fatality and serious injury risk rates of the past decade are among the worst in Canada. Reduced safety and poor productivity are both linked to excessive overtime.
5. BC Hydro needs to eliminate its scheduled overtime to provide a safe, productive working environment for its employees. In one year, one of its employees worked 2,000 hours of overtime. In one year, its

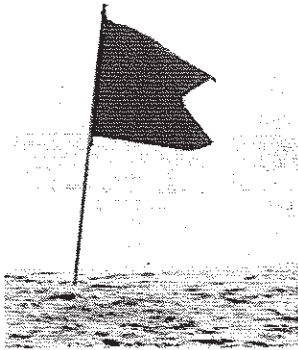
highest paid hourly worker earned, with overtime, a wage of \$343,813. This is substantially more than what a BC family doctor, on average, earns.

6. To the detriment of rate payers, BC Hydro has built a system that relies on overtime to perform construction work. In so doing, it has created a system in which public sector wages lead private sector wages and force the private sector improve its wages and benefit package to remain competitive with the public sector. This is unsound financial policy. The chart below shows where BC Hydro hourly trade wages sit in relation to other workers in BC:



### **Recommendations: Have BC Hydro cut out its Scheduled Overtime and get out of the Construction Business**

BC Hydro is a grossly inefficient and costly construction force. The solution therefore is not to have BC Hydro hire more workers and to do construction work on straight time. Construction work should be left to the private sector, which does construction work much more cost effectively for ratepayers. If BC Hydro were to continue performing construction in what it does, then the public sector would continue leading wages for construction work. This would exercise an unhealthy effect on labour costs in the private sector, which in turn would burden ratepayers unnecessarily and reduce BC's competitiveness.



## Raising a Red Flag:

BC Hydro and the Private Power Line Construction Industry

by

The Line Contractors Association of British Columbia

May 2011

### The LCA's Red Flag Report:

- Raises a red flag concerning BC Hydro's relationship with the private power line construction industry. The LCA's Red Flag Report deals with issues purely from the perspective of the power line construction Industry as represented by the Line Contractors Association of BC.
- Serves as a companion piece for the LCA's report entitled, "BC Hydro and the Private Sector: A White Paper."
- Includes a summary of the 28 recommendations made in the LCA's White Paper.

### The LCA's White Paper

The LCA's White Paper, which is a companion piece to this Report, examines issues from the broader perspective of the private sector in general, not just that of the private line contractors. The LCA believes that major government policy decisions should take into consideration the full range of economic and social factors that affect all British Columbians. The LCA's White Paper is intended as input into the government's policy decisions affecting private sector interests in general, not just those of Line Contractors. Accordingly, the White Paper takes a broader view and examines many issues that are outside the scope of the Red Flag Report.

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The Private Sector: Powering BC with Skill and Energy !

## Executive Summary

The Line Contractors Association of BC ("the LCA") consists of around 25 contractors and 15 suppliers, who provide materials and services to our contractor members. The LCA supports the government's vision and policies concerning the development of our provincial energy resources. The LCA also supports the government review of BC Hydro, and wishes to offer its two reports (this one and its White Paper) as input into the review.

For the reasons set forth in this paper and in the LCA's accompanying White Paper, the LCA believes that the system under which BC Hydro is currently performing its power line construction work operates to the detriment of ratepayers because it is inefficient and wasteful.

The LCA argues that it is in the best interest of ratepayers for the private sector to perform all of BC Hydro's power line construction work. At present, that work is divided between the public and private sectors. Under the proposed distribution of work, the private sector would perform all power line construction work, and BC Hydro would perform all operations and maintenance work. This would not compromise system reliability or service, but it would reduce cost for ratepayers.

In the LCA's judgement, one reason why BC Hydro's costs are so high for power line construction work is that its labour costs are out of control, due in part to excessive, unnecessary overtime, as these statistics reveal:<sup>1</sup>

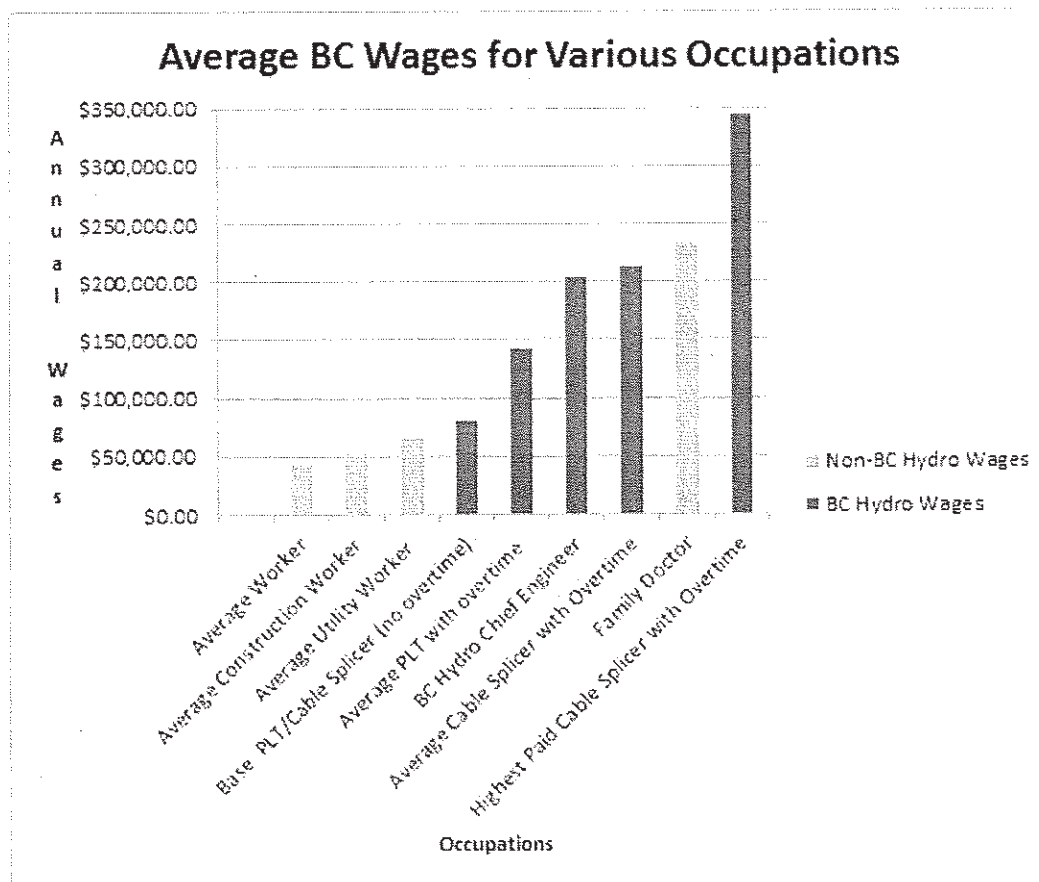
- Out of an entire work force of 436, 148 BC Hydro trades workers (Power Line Technicians and Cable Splicers) received more than \$150,000 in annual remuneration on base wages (no overtime) of approximately \$75,000 per year. These workers are doubling their annual wages through overtime. Together, these workers are more than one third of the entire work force. This one fact alone proves that there is far too much overtime at BC Hydro.
- Only 9 of these workers received less than \$80,000 in annual remuneration, 4 of whom were apprentices. This means that only 2% of this work force is working just for straight time wages.
- The average annual wages per worker, including apprentices, for these trade workers is \$139,831.22. Apprentices are workers in training whose wages are substantially lower than the wages of fully qualified workers.
- The total amount of annual wages, including overtime, for this work force of 436 is \$60,686,751.

The following chart shows just how well this work force is doing in relation to other British Columbian workers:

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<sup>1</sup>See the appendix for the data schedules from which the statistics are derived.





As an example of might be possible at BC Hydro, the situation at Puget Sound Energy in Washington state is not without interest:<sup>1</sup>

"Expanded Outsourcing Relationship with Puget Sound Energy - Puget Sound Energy (PSE) awarded a five-year contract to Quanta Services in Jan. 2011 for natural gas construction and maintenance services across the utility's six-county service area. The contract is expected to produce approximately \$400 million in revenues for Quanta during its five-year term. The agreement expands the successful ten-year outsourcing relationship with PSE for the construction and maintenance of its electric power infrastructure."

Puget Sound Energy is projecting a 30% cost savings over historical numbers as a consequence of outsourcing all electric and gas construction for new residences and businesses in Puget Sound Washing service area, as well as managing all inventory and materials for this work.

<sup>1</sup> See <http://investors.quantaservices.com/phoenix.zhtml?c=75389&p=irol-newsarticle&id=1531688&highlight=>.

Savings on this scale would enable BC Hydro to reduce its proposed rate increase to something British Columbians would be better able to afford. Moreover, it would be completely consistent with the government's policies of supporting free enterprise businesses, while protecting the province's publicly owned energy assets, since ownership of those assets would not be altered by having a private sector work force build them.

The LCA's proposal to have BC Hydro's power line construction work done exclusively by the private sector need not result in layoffs at BC Hydro. The proposed cost savings are to be achieved by the elimination of BC Hydro's *scheduled* overtime. BC Hydro's unscheduled overtime to deal with outages would remain in place.

BC Hydro claims that it is in fact more cost effective for ratepayers for BC Hydro to do its own construction at double time labour rates than it would be to do that work at straight time private sector labour rates. For the reasons set forth in this report and in the LCA's White Paper, the LCA regards this claim as false and unwarranted. In particular, the LCA notes that studies show a clear link between, on the one hand, overtime in construction industries and, on the other, reduced productivity<sup>1</sup> and compromised safety<sup>2</sup>. BC Hydro itself reports:<sup>3</sup>

"BC Hydro's performance in terms of severity and number of fatalities ranks among the worst, or the worst when compared with other Canadian electrical utilities."

BC Hydro is likely to achieve safety and productivity improvements in its internal operation if it cuts out its scheduled overtime and performs a greater percentage of its work during the normal work week. Also, if BC Hydro specializes on operations and maintenance, it will have an opportunity to focus how to handle such work productively and safely, which will improve the value proposition to ratepayers and offset the need for such a steep rise in rates.

#### **BC Skilled Labour Force in the Power Line Industry**

There is nothing in either report (this Red Flag Report or the LCA's White Paper Report) that should be construed as a criticism of the workers in BC Power Line Industry, whether they are employed in the private or public sectors. This report is entitled about whether the private sector and its culture is better suited than the public sector and its culture for power line construction work, whether that construction is for the BC Hydro system or for other clients. Both reports argue that the private sector is better suited for such work. Moreover, neither report is arguing for layoffs in either the public or private sector. Both reports aim at finding solutions that keep the present work forces fully employed, while reducing overtime and improving safety and productivity.

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<sup>1</sup>See "Impact of Extended Overtime on Productivity" as [http://ascelibrary.org/coo/resource/1/jcemd4/v131/i6/p734\\_s1?](http://ascelibrary.org/coo/resource/1/jcemd4/v131/i6/p734_s1?isAuthorized=no)  
isAuthorized=no,

<sup>2</sup>See OSHA Report on the Impact of High Overtime on Safety [http://www.usmra.com/repository/category/fatigue/Shiftworker\\_training.pdf](http://www.usmra.com/repository/category/fatigue/Shiftworker_training.pdf)

<sup>3</sup>p. 571 of 1525

## Disclosure

On June 8, 2009, the LCA filed a complaint with the BC Utility Commission claiming, amongst other things, that BC Hydro has falsely and unfairly claimed to be more cost effective than the private sector for power line construction work on the BC Hydro system. At BC Hydro's recommendation, the LCA's complaint was to be dealt with as part of the F2011 RRA. The LCA participated in the F2011 Negotiated Settlement Process (NSP), but was unable to settle its complaint through the NSP.

In its reply to the LCA complaint, BC Hydro responded:<sup>1</sup>

"An implicit assumption that underlies the LCA complaint is that the BCUC [BC Utility Commission] has a role in ensuring that BC Hydro treats external contractors fairly ... However, in BC Hydro's submission the BCUC's jurisdiction does not extend to regulating the interface between BC Hydro and its suppliers"

Without speaking to the jurisdiction question BC Hydro raises, the LCA submits that the issues raised in its complaint are directly relevant to the government's review of BC Hydro, since they bear upon the cost of service to ratepayers.

The LCA submits furthermore that, if BC Hydro were correct in its thinking that the BC Utility Commission cannot compel BC Hydro to treat contractors fairly, then it would become incumbent upon BC Hydro's shareholder (the government) to review the points at issue and, if appropriate, instruct its crown corporation to abide by its Code of Conduct, which states:<sup>2</sup>

"No Director or Employee shall create or condone the creation of a false record."

BC Hydro will deal fairly and openly with all its Contractors."

It is the LCA's position that literally millions of dollars of ratepayer money would be saved by having the private sector perform all BC Hydro power line construction work. But to prove this point, it is necessary to deal with the issues raised in the LCA's complaint. After more than a year of good faith effort by both BC Hydro and the LCA to deal with that complaint within the limits of the processes of the BC Utility Commission, the LCA feels that the issues raised in the complaint (all of which are presented in this report) should now be dealt with by the government as part of its BC Hydro Review. These issues have direct bearing upon ratepayer costs, which the LCA argues are unnecessarily high under the present grossly inefficient system by which BC Hydro does its construction work in house.

<sup>1</sup>Letter (Soffield to Hamilton) re Complaint - Line Contractors Association of British Columbia (July 6, 2009), p. 4 of 88.

<sup>2</sup>"Director and Employee Code of Conduct", p. 1 and p. 4, respectively. See [http://www.bchydro.com/e-tc/medialib/internet/documents/policies/pdf/policies\\_director\\_and\\_employee\\_code\\_of\\_conduct\\_small.Par.0001;-File.policies\\_director\\_and\\_employee\\_code\\_of\\_conduct\\_small.pdf](http://www.bchydro.com/e-tc/medialib/internet/documents/policies/pdf/policies_director_and_employee_code_of_conduct_small.Par.0001;-File.policies_director_and_employee_code_of_conduct_small.pdf)

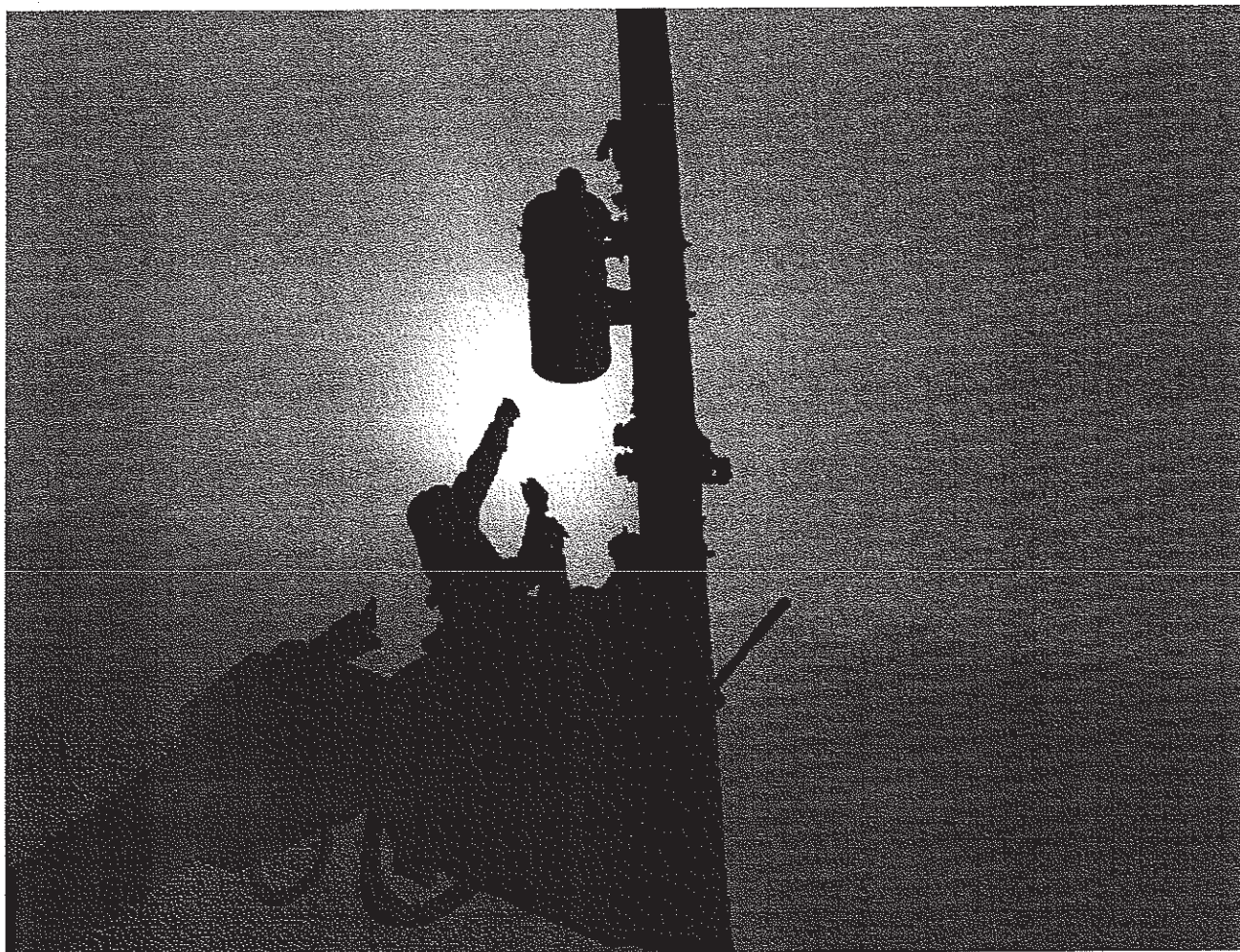


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BC Hydro and the Private Power Line Construction Industry:  
A White Paper by the Line Contractors Association of British Columbia  
June 2011

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**The Private Sector: Powering BC with Skill and Energy !**



## Executive Summary



"The BC Liberal Party and our policies are guided by ... a belief in the commitment to achieve a fair-minded and prosperous society by means of a sustainable, competitive and compassionate free enterprise system, in which individual initiative is balanced by protection of the rights, freedoms and dignity of all individuals, and which is qualified to sustain vital services to those in need."



"If I ran my company the way BC Hydro is run, I'd be broke in a year" --  
LCA Line Contractor

---

### The Four Major Parts to this White Paper

1. Part One introduces the Line Contractors Association of BC ("the LCA"), and explains why the LCA considers this report necessary.
2. Part Two lays out six broad issues that the LCA believes should be part of the context in which the government makes policy decisions with respect to BC Hydro.
3. Part Three identifies ten specific problems that the LCA believes the government needs to address in its review of BC Hydro.
4. Part Four explores BC Hydro's corporate culture and explains, in broad terms, how the LCA would try to change BC Hydro and deal with the problems identified in Part Three.

This White Paper is one of two reports that the LCA asks the government to take into consideration as part of its review of BC Hydro. The other report is entitled "Raising a Red Flag: BC Hydro and the Private Power Line Construction Industry", and is referred to as "the Red Flag Report". Both reports (this White Paper Report and the Red Flag Report) reach the same conclusion--viz., that BC Hydro's shareholder should direct BC Hydro to cease all construction work and limit its work to the operation and maintenance of its system. The White Paper Report presents a more detailed argument than the Red Flag Report, and contains a list of 28 recommendations that the LCA believes the government should implement to improve the value and transparency of BC Hydro for the people of British Columbia.

### BC Skilled Labour Force in the Power Line Industry

There is nothing in either report that should be construed as a criticism of the workers in BC Power Line Industry, whether they are employed in the private or public sectors. This report is entitled about whether the private sector and its culture is better suited than the public sector and its culture

for power line construction work, whether that construction is for the BC Hydro system or for other clients. Both reports argue that the private sector is better suited for such work. Moreover, neither report is arguing for layoffs in either the public or private sector. Both reports aim at finding solutions that keep the present work forces fully employed, while reducing overtime and improving safety and productivity.

### **BC Hydro Lack of Transparency in its Decision Making**

In its 1996/1997 *Crown Corporations Governance Study*, the BC Hydro Auditor General wrote:

#### **"Tracking and Disclosing Costs**

The provision of services to meet a public need incurs a cost to the corporation. Making public policy and its costs transparent allows the public to know what the objectives are, the costs associated with them, and any other options that should be considered. When this is not done, several problems can be created.

- There may be lack of full disclosure of objectives.
- Information about the cost of mandated services and the cost of public policy objectives may be inadequate.
- Stakeholders may receive inconsistent treatment. Some may be paying more than others for government public policy objectives.

A real concern was expressed that when the costs of implementing public policy are "hidden," the true costs of the programs they support are not accurately reflected. This reduces the effectiveness of program-related decisions. As well, not linking costs to the purpose for which they were spent hampers the accountability of all parties."

To prove the cost-effectiveness of its construction work force, the BC Utility Commission (BCUC) instructed BC Hydro in 1994 to have its construction work force engage in competitive work in order to determine whether it would be more cost effective for rate payers to use a public sector work force for construction work or a private sector work force, noting:

"In the absence of such direct competition by open bidding between CBU [BC Hydro's construction work force] and contractors, the competitiveness of the CBU cannot be determined. Hydro is unable to demonstrate the prudence of expenditures on work assigned to CBU."

Despite the BCUC issuing this explicit instruction, BC Hydro has never engaged in any competitive construction work, with the implication that the prudence of such work is in doubt. Nevertheless, BC Hydro has explicitly claimed that it is more cost effective for BC Hydro to do construction work at double time public sector rates than it would be for the private sector to do that same work at straight time private sector rates. When the LCA pressed BC Hydro to prove this claim, BC Hydro replied:

"Cost-effectiveness was brought up during the F09/F10 RRA hearing in the context of management decision making at BC Hydro, and as such, there was no consideration given to the concept of independent verification of the decisions."

The LCA submits that BC Hydro's decision making processes are non-transparent, and contrary to the instructions of the BC Utility Commission and guidelines of the BC Auditor General. The LCA notes furthermore that the reason why there is no data to verify its claim of superior cost effectiveness is that BC Hydro wilfully declined to do what the BC Utility Commission specifically directed it to do.

The LCA has requested BC Hydro to either prove or withdraw its claim of superior cost effectiveness relative to the private sector or withdraw it. It has declined to do either.

With respect, the LCA requests that BC Hydro's shareholder either confirm BC Hydro's claim with transparent data, or withdraw it on behalf of its unwilling crown corporation.

#### **BC Hydro raises Wages to attract Skilled Trades People to the Public Sector**

The *Vancouver Sun* reported on December 20, 2008 that, with the support of then Minister of Advanced Education and Labour Market Development, the Honourable Murray Coell, BC Hydro was making a voluntary wage increase to its hourly workers. The union estimated that the increase would be worth about \$6 million to its members. BC Hydro is reported to have said that "it will be revenue neutral to the Crown Corporation and won't trigger any rate increases" because "Hydro will save an equivalent amount through reduced overtime and contracting out." BC Hydro was granting this voluntary increase "in order to attract and retain qualified trades people" to the public sector.

The labour that BC Hydro "attracted" came from the line contractors in private sector. Nevertheless, Ms Leign Ann Shoji-Lee, then BC Hydro's Vice President of Operations wrote:<sup>1</sup>

"We are not targeting power line technicians working for contractors, and we do not make offers of guaranteed overtime to recruit workers from private contractors."

The LCA submits that, when BC Hydro strategically and unnecessarily raises its wages to make employment offer better than the private sector's wage offer, it is targeting contractors. The LCA submits furthermore that when BC Hydro consistently, year after year, has 98% of its work force working on overtime, overtime is indeed part of the employment package in the public sector: it is an implied promise based upon a long-standing historical practice which BC Hydro had done nothing to correct.

With respect, the LCA asks the government:

---

<sup>1</sup> Letter (8 April 2009): Shoji-Lee (BC Hydro Vice President of Operations) to Lucas (LCA President) and Skosnik (LCA CEO).

1. To provide proof that this voluntary wage increase was revenue neutral.
2. To clarify its policy on free enterprise, in particular with reference to the question whether it is appropriate for one of its Ministries to "attract" skilled labour from the private sector into a public sector operation, the prudence of which has never been demonstrated.

#### **Public Sector Wage Offers driving Private Sector Wage Costs in the Power Line Construction Trade**

A fundamental principle of free enterprise is that public sector wages should not drive private sector wages. The public and private sectors compete for the same labour pool, which is often in short supply. When the public sector improves its wage offer, the private sector must respond in kind to retain its labour force. When this happens, the public sector is driving private sector labour costs. In any event, the competition between the public and private sector for skilled power line construction labour is an unnecessary cost driver in the provincial skilled labour market.

#### **Shareholder Action needed to curb BC Hydro's Inflationary Effect in the Private Sector Labour Market**

To remove this undesirable cost driver, the LCA proposes that BC Hydro's shareholder direct BC Hydro to limit the scope of its power line technician work to the operation and maintenance of its systems, leaving all power line construction work to the private sector. With different scopes of work, the public and private sectors would no longer be in competition for the same skill set in the labour pool. Limiting the scope of BC Hydro's work in this way would also help BC Hydro to deal with its systemic overtime problems and likely improve its safety record, which BC Hydro admits is the worst of any utility in Canada.

As an example of what might be possible at BC Hydro, the situation at Puget Sound Energy in Washington State is not without interest:

"Expanded Outsourcing Relationship with Puget Sound Energy - Puget Sound Energy (PSE) awarded a five-year contract to Quanta Services in Jan. 2011 for natural gas construction and maintenance services across the utility's six-county service area. The contract is expected to produce approximately \$400 million in revenues for Quanta during its five-year term. The agreement expands the successful ten-year outsourcing relationship with PSE for the construction and maintenance of its electric power infrastructure."

Puget Sound Energy is projecting a 30% cost savings over historical numbers as a consequence of outsourcing all electric and gas construction for new residences and businesses in Puget Sound Washington service area, as well as managing all inventory and materials for this work. This example suggests that BC Hydro could perhaps save millions of dollars annually by outsourcing its power line construction work to the private sector. This might then make it possible to reduce the amount of BC Hydro's proposed rate increase.



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EAED files

59140

SEP 15 2011

Mr. Jeff Skosnik, Ph.D.  
Chief Executive Officer  
Line Contractors Association of British Columbia

Email: s.22

pc: [Premier@gov.bc.ca](mailto:Premier@gov.bc.ca)  
[ENV.Minister@gov.bc.ca](mailto:ENV.Minister@gov.bc.ca)  
[FIN.Minister@gov.bc.ca](mailto:FIN.Minister@gov.bc.ca)

Dear Mr. Skosnik:

Thank you for your June 21, 2011 email seeking confirmation that the material prepared by the Line Contractors Association of British Columbia regarding BC Hydro and the private power line construction industry, submitted to my office on June 9, 2011, would be taken into consideration as part of the BC Hydro Review.

The White Paper entitled "BC Hydro and the Private Power Line Construction Industry," along with its companion report entitled "Raising a Red Flag," were both provided to the BC Hydro Review Panel (Review Panel), and the issues and concerns raised in those reports were considered by the Review Panel as it prepared its report to Government.

The Review Panel has now submitted its report to the provincial government and its recommendations are being implemented. Should you wish to view the report, it is available at [http://www.bchydro.com/about/company\\_information/reports/annual\\_report.html](http://www.bchydro.com/about/company_information/reports/annual_report.html).

Sincerely yours,

Rich Coleman  
Minister of Energy and Mines





# Clean Energy

Association  
Of British Columbia

MINISTER OF ENERGY

REFERRAL NUMBER: 69155

REFER TO:

DRAFT REPLY ☒

INFO ☐

FILE ☐

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RECEIVED

JUL 05 2011

REMARKS:

June 10<sup>th</sup> 2011

Honourable Rich Coleman  
Minister of Energy and Mines  
PO Box 9060 Stn Prov Govt  
Victoria, BC V8W 9E3

MINISTER OF ENERGY AND MINES  
**RECEIVED**  
JUL 13 2011  
DEPUTY MINISTER'S OFFICE  
LOG#

Dear Minister Coleman:

**Reference: BC Hydro Review**

The Clean Energy Association of British Columbia (CEBC) has made its submission to the BC Hydro Review and a copy has been sent to you under separate cover.

Given the heightened level of debate and misinformation around several topics, I thought I would summarize several key points as you, the Premier and Cabinet reflect upon the report you will receive from the BC Hydro Review Panel at the end of June 2011.

- Of the 32.1% rate increase BC Hydro is seeking, only 2.6% of it is attributable to Clean Energy power producers (CEPP).
- Reviewing what is publicly known about costs for Site C, Ruskin, Hart, Waneta Expansion, and Aberfeldie, we are confident that CEPP cost/price are comparable if not lower. CEPP prices include costs for First Nations consultation/accommodation, transmission etc.
- For every \$102/ MWh expended with a CEPP via an energy purchase contract, \$50/ MWh comes back to the province in jobs, contracts and taxes. These benefits accrue to First Nations, local governments and hinterland BC communities. The clean energy sector is an economic development engine with significant potential - even today we have \$4.5 billion invested in capital, with a GDP impact of \$1.89 billion. Nearly 20,000 PYs of construction jobs can be attributed to the clean energy sector and \$378 million has gone to governments as taxes and fees.
- Over the next 10 years, if BC needs to meet an additional 21,487 GWh of domestic demand plus an opportunity to export 12,000 GWh, this total demand could translate into 117,140 PYs of construction employment, 11,689 on-going operational FTEs and \$2.3 billion in government tax revenues.

Clean Energy | Association of British Columbia

1230 - 888 Dunsmuir Street | Vancouver, BC V6C 3K4, Canada | Office: 604.568.4778 | Fax: 604.568.4724 | [www.cleanenergybc.org](http://www.cleanenergybc.org)



- Contrary to media rhetoric, the self-sufficiency provisions of the *Clean Energy Act* have not cost the ratepayer anything. No self-sufficiency purchases have been made - we remain a net importer of electricity.
- Self-sufficiency is sound public policy that has been a part of BC Hydro's planning for a long time. Relying upon the spot market is not prudent planning. What happens if all jurisdictions decide to rely upon the spot market – prices go up and scarcity sets in? Relying on the spot market also means that economic development benefits of energy production accrue to external jurisdictions – not job creation for BC families.
- Opportunities exist for BC to capitalize upon NE gas as a transition fuel in its economic development planning. NW industrial development and NE gas developments can be fueled by clean electricity from BC's renewable sector and BC Hydro's heritage system if investments are made in transmission infrastructure in the Dawson Creek area and in an extension to Fort Nelson.

BC has an abundance of clean and renewable energy sources. We can meet domestic needs and also provide exports for sale to neighbours who need firm GHG free energy.

British Columbia should be proud of the leadership role it has staked out with climate action, carbon management and fostering clean energy and clean technology developments. We need to maintain this position for the long term health and benefit of our people.

BC Hydro is a key part of the go-forward plan for a clean, secure and prosperous future for all British Columbians. It needs to upgrade its infrastructure and this requires significant investments today and over the next several years. CEPPs are part of the mix too; indeed we need to work together. And at the end of the day we will still enjoy amongst the lowest energy costs in the world.

Clean Energy BC remains committed to working with all stakeholders to develop policies, regulations and guidelines required to strengthen British Columbia's economy in an environmentally responsible manner.



# Clean Energy | Association Of British Columbia

I look forward to an opportunity to brief you on our submission as a follow-up to the first meeting we had with you just after your appointment to the energy portfolio. We could do this again in Langley.

Sincerely,

Paul Kariya  
Executive Director

Cc: Mr. David Cobb  
President and CEO, BC Hydro



AUG 11 2011

Mr. Paul Kariya  
Executive Director  
Clean Energy Association of British Columbia  
1230 - 888 Dunsmuir Street  
Vancouver, BC V6C 3K4

Dear Mr. Kariya:

Thank you for your June 10, 2011 letter regarding clean and renewable energy production in British Columbia, the BC Hydro Review and media misinformation on energy pricing.

Misinformation on electricity issues does concern me, and I take steps to correct errors where I am able, through letters to the editor and opinion editorials.

The BC Hydro Review Panel, which was established on April 7, 2011, has now submitted its report to the provincial government. We will review and consider the report in detail and give its recommendations full consideration. My colleagues and I will be reporting out publicly in due course.

Thank you, again, for taking the time to outline some key points about electricity production and policy.

Sincerely yours,

Rich Coleman  
Minister

.../2

- 2 -

pc: Mr. Dave Cobb  
President and Chief Executive Officer  
BC Hydro

Mr. Les MacLaren  
Assistant Deputy Minister  
Electricity and Alternative Energy Division  
Ministry of Energy and Mines



MINISTER OF ENERGY	
REFERRAL NUMBER:	59427
REFER TO:	
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RECEIVED	AUG 10 2011
REMARKS:	

August 4, 2011

s.22

Dear s.22

Thank you for your letter regarding the current review of BC Hydro's expenditures and investment in its capital assets.

I appreciate the time that you have taken to share your thoughts with me and have forwarded a copy of your letter to the Honourable Rich Coleman, Minister of Energy and Mines, for his review and consideration as well. You can be assured that your comments and suggestions will be included in related discussions between the Minister and his staff.

Again, thank you for writing.

Sincerely,

Christy Clark  
Premier

pc: Honourable Rich Coleman



July 9, 2011

Premier Christy Clark  
West Annex  
Parliament Buildings  
Victoria, BC  
V8V 1X4

Dear Premier,

**RE: British Columbia Hydro**

While it is useful to review the capital and operating expenditures of B.C. Hydro, with the aim of ensuring affordable electricity for households and businesses, there are other important strategic issues to be considered.

BC Hydro is a key strategic asset of British Columbia, providing us with affordable electrical energy at a time when fossil fuels are increasingly in short supply. The legacy investment in dams, power plants and transmission facilities could prove a critical asset to the province if warnings from scientists and engineers of "peak conventional oil production" are correct. In my opinion, the risk of a gap developing between global energy production and consumption is a greater concern, over the next couple of decades, than global warming.

Substantial capital investment in BC Hydro is warranted, even if the result is higher electrical rates. Under the NDP government of the 1990s, BC Hydro was treated as a "cash cow" by the New Democrats. They failed to reinvest in capital projects, at BC Hydro, and transferred funds from the crown corporation to general government accounts. Consequently, many of the capital assets of BC Hydro are old and badly in need of either replacement or renovation. The NDP demonstrated an extremely short-term perspective, sacrificing the future for current consumption.

Moreover, in my opinion, for the Province of British Columbia to depend on outside sources of electricity, may prove to be a mistake. Unlike oil and gas, electricity cannot be stored (except by pumping water up to the reservoirs behind dams) and utilities are in the constant balancing act of matching supply to demand. Well documented problems exist in the US electrical grid (e.g. dependence on fossil fuels, inadequate connectivity, underinvestment in transmission lines), which highlights the risk of depending on outside sources of electricity, such as the United States.

Prudence suggests that major capital projects, at BC Hydro, should be accelerated over their present timetables. Growth in developing countries, are increasing the consumption of many raw materials, on a global basis. Basic commodities, such as copper and iron ore, are increasingly in short supply, a situation that, while benefiting Canada as a commodity exporter, will likely increase the cost of capital projects. A symptom of this underlying problem was escalating costs of major capital projects prior to the financial crisis of 2007 – 2009.

In summary, British Columbia has a unique asset, in the form of BC Hydro, as a result of forethought and planning of the former Social Credit Party. People such as William Andrew Cecil Bennett, built the province that we are rightly proud of, today. As the Premier of the Province of British Columbia, you are in the unique position, to carry on WAC's vision for a prosperous further for our great province.

Yours sincerely,

s.22

## Phosy, Krisna SSBC:EX

---

**From:** MacLaren, Les MEM:EX  
**Sent:** Wednesday, April 13, 2011 6:30 AM  
**To:** Brown, Chris FIN:EX  
**Cc:** Champion, Jennifer MEM:EX; Fitzpatrick, Brigitte C MEM:EX  
**Subject:** Review Materials

Hi Chris:

Just back in my office after our meeting yesterday morning. As discussed, please find attached:

| s.13, s.16, s.17 |

└ s.13, s.16, s.17

Cheers

***Les MacLaren***  
Assistant Deputy Minister  
Electricity and Alternative Energy Division  
Ministry of Energy and Mines  
Office: 250 952-0204  
Fax: 250 952-0258

Pages 117 through 178 redacted for the following reasons:

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s.13, s.14, s.17

## Phosy, Krisna SSBC:EX

---

**From:** Foster, Doug FIN:EX  
**Sent:** Wednesday, April 27, 2011 5:19 PM  
**To:** MacLaren, Les MEM:EX  
**Subject:** FW: BC Hydro review  
**Attachments:** OREG\_The\_Role\_of\_FITs.pdf; ATT00001.htm

Thoughts on this one please. D.

---

**From:** Kern, Nina FIN:EX  
**Sent:** Wed, April 27, 2011 2:15 PM  
**To:** Foster, Doug FIN:EX  
**Subject:** FW: BC Hydro review

Doug,

Over to you....

Thank you,

Nina

Tel: 250.387.3184 | Fax: 250.387.1655

---

**From:** Chris Campbell s.22  
**Sent:** Wednesday, April 27, 2011 10:47 AM  
**To:** Kern, Nina FIN:EX; Wenezenki-Yolland, Cheryl EAO:EX; Pink, Linda PREM:EX  
**Subject:** BC Hydro review

Team John, Peter and Cheryl:

Can I share a few thoughts based on our engagement with BC Hydro, the various task forces and the electricity working group of the Climate Action Secretariat in the last five years or so. If it will help I can meet you at your convenience.

If I have a concern about your task, it is that "rate application fright" had already driven BCH back into its "least cost now" approach to planning and there is a risk that your review will entrench this as a very large organisation defaults to cost postponement rather than cost reduction. At a higher level, I am concerned that your review will set the expectation that BC's extraordinary electricity prices are an entitlement that can be maintained by cutting and postponing, a situation that sets up future generations with larger shocks - perhaps not unlike the way that the investments of the 70s and 80s have protected the current generation. (As a national association, I deal with New Brunswick where government has been fixing rates and now created a problem that changed the government once and threatens to do it again!)

The Section 5 Inquiry was to plot a path for generation and transmission with a 30 year horizon. It identified potential energy clusters and transmission requirements based on an evolution of the BC H system that reduced dependence on one climate-change prone resource and might direct the reinvestment in the grid in different direction. When BC H was tasked with picking that plan up as an integrated resource plan, they took their LTAP (long-Term Acquisition Plan) process and added some of the Clean Energy Act objectives. We and others expressed some concern that this was simply LTAP with another evaluation to be applied to its outputs rather than a planning process driven by the act's goals. Worse, the approach is to develop an acquisition plan for 20 years and a transmission plan for 30; the argument is transmission development takes longer! Surely that very argument means that you need the long term resource development plan to initiate transmission (re)development so that it is ready for the system as it may operate toward mid century. In recent months it has been even clearer that the IRP has become LTAP, not even LTAP+. This short-term

planning is what lost BC self-sufficiency and it is likely to strand resources, increase resource and cost risks and lose opportunities to use the \$4B British Columbians invest each year for the long-term advantage of their offspring.

I am writing as the leader of the efforts to diversify into wave, tidal and in-stream generation. The two former are potentially enormous resources which can decrease our reliance on precipitation. All are great opportunities for British Columbia to share in the creation of a new worldwide industry. Government committed to the concept of incubating these emerging resource, technology and economic opportunities with the concept of a limited Feed-in-Tariff to create a market driver (I have attached a FIT discussion document). Ministry of Energy and Mines has drafted potential regulations under which BCH would establish these emerging energy FITs. BCH has been researching approaches recognising that the focus in BC is quite different from the FITs in Ontario or Germany and very similar to those under regulatory review in Nova Scotia right now. Our concern about the current review is that it might arrive at the same place that the BCUC was several years ago when it restricted BCH ability to engage in development activity aimed at longer-term security of supply and price. FITs are needed because emerging energy/technologies need a higher market price while they are accumulating experience and reducing costs. Higher power acquisition costs, because the projects are relatively small, will be a small pressure on BC H costs. Nonetheless, there is a danger that this is seen as an easy "avoided cost". This saving could translate into higher future costs if the lack of experience means that the resource development options in the northwest and on Vancouver Island are not considered in planning. I trust that your effort will neither target this type of engagement/investment, nor create a corporate culture in which this type of initiative is set up to fail.

I note that your mandate includes looking at the organisational structure and I hope it does not simply address proliferation of executive and management positions or salary growth. David Cobb has said it is maybe time to look at the entire operation and it seems that this should be done in the context of delivery on the Clean Energy Act, particularly as the mandate of that \$4B company is being recognised as one of the province's economic engines. Are the economic development and technology advancement functions additions to the generation, distribution and administration functions or are they central to the planning and operation of this large company?

There are other issues I can raise, but I urge you to discuss the work of the Electricity Climate Action Working Group with Les Maclaren or Tim Lesiuk. There was much discussion of the changing role of BC's clean electricity which will drive demand. There was significant discussion of achieving an economic "echo" from the developing needs that BC H will be spending ratepayers money on.

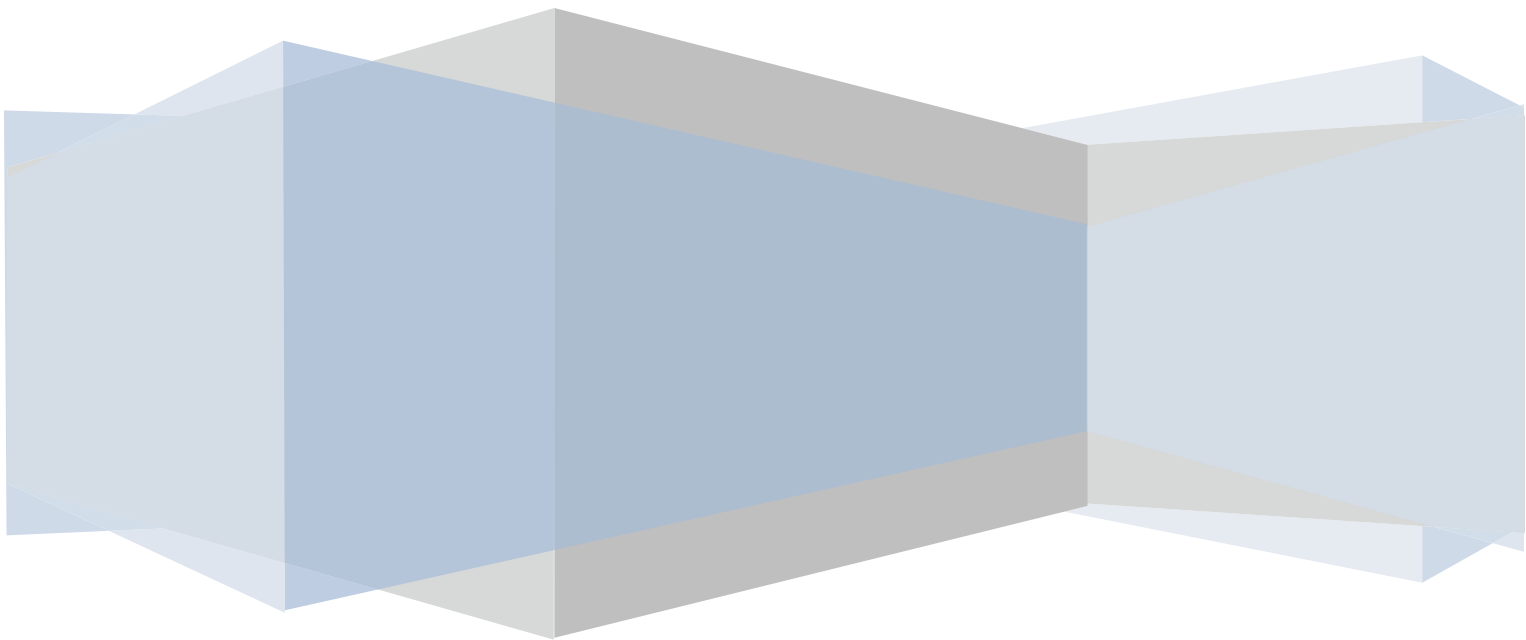
As I write this, I am conscious that I have been a strong believer that BC H has been, and is, one of the province's great advantages. The Clean Energy Act built on the past policy efforts to secure that future advantage. The rate impact fear and your review has, I fear, already eroded emergence of the needed directions from BC H. I have this image of a turtle that has pulled in legs and head in the hope that things will be different when they re-emerge - at best this wastes time, at worst we are making decisions based on short-term expediency.

Good luck in a difficult task.



## **The Ocean Renewable Energy Group**

# **The Role of Feed-in Tariffs: Moving Ocean Energy Ahead in Canada**



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## Summary

Ocean energy will provide cost-competitive clean energy that is highly dispatchable and scalable from community size to large scale installations, resistant to climate change and could be as much as 20% of the renewable electricity that Canada will add by 2050. These developments can be accelerated through policies and programmes that create drivers to compensate for the market disadvantages faced by an emergent energy resource development competing with incumbent and amortised infrastructure, historically embedded subsidies and lack of accounting for environmental or resource-consumption *externalities*.

Canada is about to join the wave, tidal and in-stream energy development-leading countries with markets supported through feed-in-tariffs. As the policy objectives of Nova Scotia and British Columbia are launching regulatory and programme development in Fall 2010, the Ocean Renewable Energy Group is offering a discussion of just how those initiatives might most effectively launch a new energy and economic opportunity.

OREG has promoted the creation of market pull as an essential mechanism to encourage this. Feed-in-tariffs are a critical component. Successful design and implementation will:

- Ensure that ocean energy resource, technology and industry development continues to move forward, as one of the world leaders;
- Build the foundation of a value chain by providing an incentive that mobilizes finance, project development, project support and technology delivery players in relationships that can create the longer-term competitive industry;
- Attract the early market entrants who see the transition through a supported market into longer-term clean energy procurement plans, and that ongoing commercial market opportunity;
- Create a market that counters the inherent energy market failure that favours incumbent industries, embeds their subsidies and has not accounted for environmental and resource depletion costs;
- Directly stimulate technology and resource development to meet policy objectives while providing a mechanism that can be adjusted to reflect cost reductions expected with this experience; and,
- Launch significant development at the least cost if associated policy and actions streamline environmental assessments and approvals, interconnection and integration processes and costs, and, promote sharing of infrastructure and strategic research.

A variety of European initiatives have opened supported markets with limited uptake until the recent round of leasing in Scotland which resulted in significant projects being lined up by power project developers and utilities attracted by the prospect of a green energy price supplemented by the sale of 5 Renewable Obligations Certificates for each MWh produced. This ROC allowance, equivalent to a feed-in-tariff of about \$400/MWh over conventional power purchase prices, is likely our best assessment of ocean energy marginal costs in 2011. If these feed-in-tariffs do trigger the appropriate pioneer projects in the next couple of years, they will launch a rapid reduction of costs resulting from the investment in learning from these pilots.<sup>1</sup>

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<sup>1</sup> [www.carbontrust.co.uk/Publications/pages/PublicationDetail.aspx?id=CTC601](http://www.carbontrust.co.uk/Publications/pages/PublicationDetail.aspx?id=CTC601)

## The State of Development

While ocean energy concepts, technologies and even projects have been in development for over one hundred years, the modern ocean energy industry has been moving towards commercialisation for approximately 10 to 12 years. This may seem like a long enough period of time for wave and tidal energy technologies to reach a commercial stage, however one must remember that the modern wind energy turbine has been in development for over 30 years.<sup>2</sup> It has also been said that ocean energy contains far more challenges due to the engineering required to operate in the ocean and due to the “boundary-less” environment of the ocean. This characteristic of the marine environment creates permitting and regulatory challenges, as well as challenges association with operations and environmental impacts. Therefore, support for all stages of the commercialisation process is required to bring these technologies forward and to realise their clean energy and economic development benefits.

## Worldwide

Technology and project developments for ocean energy are occurring around the world; key regions include Scotland, Ireland, Wales, England, Australia, New Zealand, Portugal, Spain and the US. The most active countries have launched testing centres, research centres of excellence, and device demonstration centres. R&D programs have supported scaled demonstration projects, and many regions are now looking to install full scale generators (devices). It is well understood that research and testing must be completed not only on single devices but also on arrays of multiple devices to understand how they interact together and with the natural environment. WaveHub, the first testing centre for arrays, located in South West England, is in the process of connecting the grid cable.

Jurisdictions worldwide have also recognised the need for market development mechanisms to help ‘pull’ ocean energy technologies through to commercialisation. These market mechanisms provide crucial signals for investment, utility engagement, and the strengthening of an industry supply chain. Feed-in tariffs have been implemented in a number of countries, but early price setting proved too low:

- Portugal had the first wave energy feed-in tariff, which at the time of creation was approximately 33 US cents per kWh
- Ireland has established a 22 Euro cent per kWh feed-in tariff

Emerging Scottish policy seems to have established the 2010 market price for marine energy using a renewable obligation certificate (ROC) program; the ROCs are credited and can be sold. Wave and tidal energy will received up to 5 ROCs (value ca \$400) per MWh instead of the standard one offered for an onshore wind project.

## Canada

Despite the lack of a national, or even strong regional ocean energy strategies, Canada is considered one of the global leaders in the development of wave, tidal and in-stream energy. This is primarily due to the high level of participation and leadership of Canadians in the international industry development activities. This includes participation in the International Energy Agency Ocean Energy Systems Implementing Agreement, and leading the International Electrochemical ocean energy standards development. Canadian companies have also been at the forefront of technology and project developments. New Energy Corp, based in Alberta, has successfully developed and sold small-

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<sup>2</sup> World Wind Energy Association. 2006. “Wind Energy Technology: An Introduction”.  
<http://www.wwindea.org/technology/ch01/estructura-en.htm>

scale in-stream turbines for use in river systems in Canada and the US, and is working on market opportunities in India. Tidal generator developer Clean Current Power Systems has signed a licensing agreement with Alstom, which takes the market opportunities for their technology to another level.

Perhaps the highest level of activity can currently be seen in Nova Scotia, where the government is supporting the creation of a tidal energy feed-in tariff and the FORCE development and research centre. The Fundy Ocean Research Centre for Energy (FORCE) coordinates the activities of the tidal energy testing centre, along with building an understanding of how the tidal energy devices will interact with the Bay of Fundy environment. Utilities across Canada are playing a larger role in ocean energy developments and support. Nova Scotia Power deployed an OpenHydro device at the FORCE facility in November 2009 and its parent EMERA has taken a shareholding position in Open Hydro itself. Minas Basin Pulp and Power is partnering with Marine Current Turbines to deploy a tidal generator at FORCE in 2012. Similarly Alstom will deploy its Clean Current design in 2012.

FORCE is currently contracting for cable installation to four berths, each to have a transmission capacity of close to 20MW. If installed in 2011, this will be the largest marine energy infrastructure in the world.

In Nova Scotia the recent release of draft regulations places the design of a Community feed-in-tariff for renewable projects, including wave, tidal and in-stream, in the hands of the Utilities and Review Board. The board will also design a feed-in-tariff for early array projects taking advantage of the FORCE infrastructure.

BC Hydro has also continued to work at finding ways to advance emerging energy technologies in BC. The recent *Intentions Paper* builds on the goal of the 2010 Clean Energy Act to use feed-in-tariffs to advance wave, tidal and in-stream energy. BC Hydro is to be tasked to deliver on this goal.

Despite the amount of industry activity and world-wide sector participation, the Canadian ocean energy industry is quickly reaching a point where it could be sidelined in the international development. Strategies that layout the future of the sector in Canada, with clear government support and championing, tied with market mechanisms and research funding are needed to move the industry forward. These vital signals are needed to engage private investors and project financiers. As with other technology development and innovation industries, ocean energy needs the support to push through to commercialisation.

A technology roadmap that points to the challenges and opportunities in development of an industry will be ready in 2011. The feed-in-tariff initiatives can be a key part of that signal that progressive development of ocean energy will be possible. OREG is offering this analysis on the importance of the decisions around the implementation of the feed-in-tariffs. Designed and made to work, these decisions will launch industrial development and the development of these resources with which Canada is blessed.

## **The Vision for Development in Canada**

The Ocean Renewable Energy Group mission has been to develop: *A Canadian sustainable ocean energy sector, serving domestic and export power needs and providing projects, technologies and expertise in a global market.*

In 2006, Canada's National Roundtable on the Environment and the Economy developed an advisory note addressing the potential to transform our energy sector to meet mid-century emission reduction goals.<sup>3</sup>

A part of the potential was an addition of some 85,000 MW of renewable electricity. 14,000 MW of wave and tidal was foreseen as a major contribution. In looking at the potential marine energy technology roadmap, OREG has considered the opportunity in building an ocean energy sector with a capacity of about 15,000 MW over four decades. A doubling each decade will see the most growth nearer mid-century, but it still creates an opportunity for 1,000 MW to be developed in the current decade. Creation of market drivers in 2011 should launch an industry capable of installing and maintaining 100 generators each year by 2020, and there is an opportunity to grow capacity to install four per day in the 2040's.

Community-scale projects may be an economic opportunity for coastal communities searching for a longer-term, balanced and sustainable future. Canada's marine fabrication and shipbuilding sector has always suffered from the episodic needs of government shipbuilding, the needs of offshore oil and gas mega-projects helping, but not being consistent. A paced development of ocean energy over coming decades can be used to create a sustainable supply and support infrastructure. The recent Scottish roadmap suggests that the industry needed to support 2,000 MW would employ 15,000 people.<sup>4</sup>

## Feed-in Tariffs: One Tool, Differing Goals

Feed-in tariffs (FIT) are a renewable energy policy tool that supplies a fixed purchase price for electricity. They are used to stimulate the rate of deployment of new renewable supplies, and frequently have prices set at differing levels for different resources; which bring out the "best-in-class" rather than having all renewables compete against each other. A secondary, economic, objective often is to encourage early adoption, to build a supply and delivery industry ready to take advantage of more widely-developing markets. In some cases the tariff may be varied by geography or scale of project in order to stimulate particular types of project development. A final objective is often to ensure that early stage development of new technologies and new resources can emerge along a market-supported pathway. They have been found to be a direct policy initiative that corrects the market failure brought about by subsidies and failure to cost externalities such as pollution and social costs of competing energy sources, and they overcome the advantages conventional energy systems enjoy as a result of incumbency. They work to create a bridging market toward a more competitive energy marketplace in the longer term.

Reviews of feed-in tariff objectives, approaches, challenges and successes were released by Deutsche Bank and the US National Renewable Energy Laboratory in summer 2010.

The Deutsche Bank assessment led with: *Feed-in tariffs continue to be the driving force behind many renewable energy deployments globally, and are an effective policy tool for catalyzing the large investment flows needed to achieve 2020 emissions reduction targets and clean energy mandates. European countries continue to lead the way in creating the transparency, certainty and longevity needed to attract sustainable capital investment, although the momentum has spread to Asia, Canadian provinces and some US states and municipalities.*<sup>5</sup>

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<sup>3</sup> <http://www.nrtee-trnee.com/eng/publications/wedge-advisory-note/ecc-wedge-advisory-note.pdf>

<sup>4</sup> <http://www.scotland.gov.uk/Resource/Doc/281865/0085187.pdf>

<sup>5</sup> <http://www.nrel.gov/docs/fy10osti/44849.pdf>



The NREL report stated: *Feed in tariffs are the most widely used policy in the world for accelerating renewable energy deployment, accounting for a greater share of RE development than either tax incentives or renewable portfolio standard policies. FITs have generated significant RE deployment, helping bring the countries that have implemented them successfully to the forefront of the global RE industry. In the European Union, FIT policies have led to the deployment of more than 15,000 MW of solar photovoltaic power and more than 55,000 MW of wind power between 2000 and the end of 2009.*<sup>6</sup>

Feed in tariff policies typically include three key provisions: (1) guaranteed access to the grid; (2) stable, long term purchase agreements (typically, about 15-20 years); and (3) payment levels based on the costs of generation. In many countries, they include streamlined administrative procedures that can help shorten lead times, reduce bureaucratic overhead, minimize project costs, and accelerate the pace of RE deployment, all of which reduces project costs and makes lower value feed in tariffs effective.

Clearly, there is an emerging history of feed in tariff program design that can be used to optimize policy and program rules to achieve the objectives desired in Canadian jurisdictions. Within those, the desire to move emerging energy opportunities, like wave, tidal and in stream, forward is a clear fit.

## Opportunities Created by Feed-in Tariffs

### Market Driver

In more-mature renewable energy sectors there are customers who develop power projects and buy generation technologies and associated services from a supply sector. In immature sectors, a market supported by feed-in tariffs is going to be critical in growing that value chain.

Ocean energy has not had a market driver and developments in ocean energy in the last decade have largely been driven by technology developers. Many of these technology developers have been forced to become the developers of the first full-scale pilot projects, as the next step in demonstration, and to attract project-developer customers.

Deployment of even a single 1 MW trial may have a price tag of \$20m and stretch technology developer companies into permitting, marine operations and power project development at the expense of technology refinement or development of manufacturing capability. If these early projects have a revenue stream from sales of electricity produced (a suitable feed-in tariff), they will move from technology push to market pull. If the focus is on the value of electricity output, even early projects may mobilise a prototype of what may become a mature project delivery chain.

If there is a price for the electricity, the utilities are engaged as buyers and integrators and power project developers see a quasi-commercial opportunity that may lead them to a new commercial opportunity. The supply chain will be attracted to what appears to be viable projects, and this project viability removes one of the barriers to project financing. While these projects are still in the realm of trials, demonstration and development, they will be focused on the gaining the experience needed to install, operate and maintain an integrated power production system.

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<sup>6</sup> [http://www.dbcca.com/dbcca/EN/media/DBCCA\\_Fit\\_Update\\_20100727.pdf](http://www.dbcca.com/dbcca/EN/media/DBCCA_Fit_Update_20100727.pdf)

A market driven development will reward successful power delivery and incent project developers to optimize on the installation, operation and maintenance. Technology developers will optimize production efficiency, reliability, maintainability and manufacturing cost. If properly designed it can contribute to small-scale trials, but most importantly it can launch the first commercial-scale pilots. These are likely to be arrays of generators, with projects having to be as large as 20 MW in order to trigger efficiencies in permitting, manufacturing, installation, interconnection and operations and maintenance.

## Development Pathway

Existing, 'conventional' energy generation systems, such as hydro, thermal and gas turbines, have shown dramatic price reductions and gains from the 'experience curve'. When compared to the cost of wind generators, ocean energy is often referred to as lagging 10-20 years. However, the lower initial cost of ocean energy compares favourably with the early stages of wind development.

Feed-in tariffs offer a supported market that meets those early costs, de-risks to some extent and provides an incentive for early projects. They need to signal that a supported market will be there through the stages of a development pathway that allows ocean energy to emerge as a competitive renewable.

When feed-in tariffs are set to achieve development targets, such as installed capacity or energy production, together with at least notional longer-term targets, they provide the right signals to mobilize investment and delivery chains.

While the concept of offering feed-in tariffs to meet the cost needs of different technologies or resource developments is well proven, the development pathways of different emerging sectors may have different challenges, scales and timing. Individual feed-in tariffs with specific resource, capacity objectives and financial terms are needed to reach the unique goals for various sectors. For ocean energy this may be a particular concern that can only be addressed by setting direct targets for wave, tidal and in-stream developments within any overall programme target. There is a probability that some other renewable sectors could see rapid deployments of projects on private lands, with minimal permitting challenges, at scales that are relatively easy to finance and with minimal pioneering in deployment and operations. In contrast, early ocean energy projects will struggle with complex permitting and the challenge that marine projects cannot survive if they are small, and larger projects bring even larger financial challenges. A feed-in tariff can be effective in moving wave, tidal and in-stream energy ahead if separate pathways for each emerging energy resource are launched.

## Accelerate Cost Reduction

Performance improvements, cost reductions, and investment prospects will only come from accumulated experience with individual technologies or groups of similar technologies.

Progress in recent years has allowed the first full-scale trials of individual generators, but these projects have been extremely hard to launch, often had financing challenges and were subject to delays and setbacks. This can be overcome if a feed-in tariff program meets the cost needs of projects and is large enough to encourage multiple projects that compare technologies and allow experience with arrays.

Access to feed-in tariff support as and when projects can be developed may establish a progressive flow in development that could never be achieved by episodic rounds of capital assistance, which often by their nature set up competition within and across sectors. If a feed-in tariff succeeds in mobilizing multiple projects in a region, particularly if their timing is close, the opportunity for mobilizing appropriate support, service and installation infrastructure increases. With multiple technology and operational approaches overlapping, the collective growth in knowledge and experience can be expected to accelerate, at least for the large parts of projects that fall outside company *Intellectual Property*.

A properly designed feed-in tariff program will review or reset prices as experience drives down project and technology costs. If it works correctly, project developers will be incented to redevelop projects with later technology versions that improve economic and power production performance. The ability for later technology versions to be swapped into existing projects (none of the project start-up delays and costs) will accelerate the technology refinements on the route to series manufactured competitive products.

## Critical Elements in Canadian Feed-in Tariffs

### Price

The risk of excess caution in setting low feed-in tariff values, financial or capacity caps undermining the pathway is very real. The risks of the excessive cost of an oversubscribed programme, or of overstimulation accelerating development beyond acceptable environmental risk, are likely very low for emerging technologies and project development capacity. This is particularly so for ocean energy, with its particular challenges.

It is essential that the initial feed-in tariffs for wave, tidal and in-stream projects pay a price that stimulates project developer interest and helps them in the challenge of project finance. It is possible that lower prices might serve to offset some of the costs of technology developer demonstration projects, but these early stage projects are most likely to be triggered by capital assistance and success in raising investment. While these projects should also benefit from feed-in tariffs, it is the launch of market driven rather than technology driven projects that will accelerate learning and cost reduction.

The feed-in tariff electricity price needs to be high enough to be the incentive that launches multiple projects, and early commercial-scale projects, in order to move technology developers from prototype to series production, to mobilize a supply chain and to launch a support infrastructure.

The establishment of feed-in tariff rates must address the *All-Up* project costs. The costs of generator technologies may be a significant part of project costs, but the project development, permitting, preparation, installation, monitoring, operations, maintenance, insurance and financing are all likely higher than will be seen for later mature sector projects. It is the feed-in tariff support that addresses these pre-commercial extraordinary costs and moves an ocean energy development project closer to an equality with mature alternatives, business opportunity.

The feed-in-tariff prices have to be a successful stimulus. They are the tool that mobilizes pre-commercial activity, attracts investment and builds capacity so that energy from these emerging resources is available, and becomes competitive, sooner. They are not a *grudgingly-offered* subsidy; rather they are the investment that triggers developments needed to bring the desired longer-term resource prospects, and economic development opportunities, into play in a timely manner.

The scale and cost of demonstration and development for ocean energy projects are particular problems for many financiers. Using a feed-in tariff to create an early marketplace may increase the likelihood of VC finance of more advanced technology development companies. They will need prices using rates of return higher than typical for mature electricity projects to mobilize the needed capital for even the smallest projects.

Developers for mature renewable energy projects rely heavily on debt financing and a number of financial houses are well-experienced with wind, run-of-river and other technologies. Developers of ocean energy projects may or may not have the needed business track record, but even established power project developers will be trying to finance projects using technology with very limited operating histories, maybe limited warranties and likely limited insurability. One of the goals in providing a firm and adequate electricity price in a feed-in-tariff will be to allow developers to demonstrate a viable project return, which may improve prospects for some additional project finance opportunities.

## Stability

Successful feed-in tariff policies need to provide **TLC** for investors in order to effectively catalyse private investment. In other words:

- **Transparency** How easy is it to navigate through the policy structure and execute?
- **Longevity** Does the policy match the investment horizon and create a stable environment?
- **Certainty** Does the policy deliver predictable revenues to support a reasonable rate of return?

Transparency in the feed-in tariff demonstrates the market pull toward larger-scale development of the emerging technologies and resources. Longevity is a combination of assurance that the feed-in tariff will still be available at the time of power delivery, and most importantly it is the contract duration during which the feed-in tariff will be paid. Certainty is the ability to generate reliable estimates of project return that can be successfully used to justify project expenditures.

In fact a feed-in tariff can only succeed if the product of price and contract duration fit, not only the desires of financiers, but also the inter-generational time in technology development, improvement, and cost reduction. For more mature technologies, lower feed-in tariffs for longer contract periods (often 20 years, 40 for waterpower in Ontario!) will work. For the more rapidly evolving technologies and operating experience expected in wave, tidal and in-stream, a shorter project pay-out contract (with matching feed-in tariff rate) is more likely to stimulate the needed projects, and to encourage their renewal using later generation approaches.

Feed-in tariffs will have to be reviewed and changed if they are ineffective in generating project activity, and these reviews should occur as soon as possible if this problem appears. They will need to be reviewed periodically, when capacity targets are met, or when it is clear that costs have dropped significantly. The Certainty requires that changes in feed-in tariffs are made according to an understood schedule and not apply retroactively; reviews should set the rules for the next generation of projects.

Stability means that the supported market will adjust to maintain development through progressively lower levels of support as the need for support is decreasing.

## Scale

The majority of successful initiatives have not allowed limits on project size to shape development. Most have recognized that the feed-in tariff is intended to stimulate, and limits and caps are not needed for sectors that need the market support.

Limiting project scale to 5 or 10 MW has been used by jurisdictions with a specific focus on development of distributed generation and it is likely that feed-in tariffs will have to vary to match process and costs at small project scales.

Stimulating ocean energy development is likely to prove difficult. Project size limits or limited program scope is likely to send inhibitory signals that will drive development interest toward alternate opportunities. Having a segregated community-scale feed-in tariff will create the focus for distributed generation development. Site, project development and finance considerations are likely to limit project scale, so limits on size may not be necessary.

It has been argued that by limiting early projects to small-scale, environmental research might advance fast enough to reduce and simplify the permitting challenges. In fact without additional and larger projects it seems likely that little definitive observation is going to be possible. It also seems probable that even small marine power projects will trigger Canadian Environmental Assessment action.

## **Development Targets**

A feed-in tariff is a tactic to accelerate development of renewables capacity. To be effective, it has to be clearly part of longer term strategy that signals the scale, scope and stability of the emerging marketplace. If the objective is to launch an emerging energy project development sector, it is critical that this supply chain can see a development path that goes beyond the initial projects.

However it is critical that even the initial focus on feed-in tariffs is to successfully deliver an initial target of capacity or electricity production. Utilities or regulators may be charged with development of feed-in tariffs, but it is essential that they be tasked with delivery of production results rather than simply being asked to create feed-in tariffs as an opportunity. A feed-in tariff that elicits no activity clearly fails to meet all objectives.

## **Access Certainty**

If feed-in tariffs are implemented with the goal of advancing pre-commercial energy opportunities, the program rules must ensure that competition between emerging resources does not accidentally exclude one or more. Price differentials are well accepted in the feed-in tariff experience, but development of wave, tidal and in-stream may happen more slowly than eligible commercial, or other pre-commercial sectors. A successful program is likely to require “reserves” within overall targets so that program opportunities remain open for all of the target sectors.

Many feed-in tariffs are embedded in forms of Standard Offer Contracts, often with facilitated interconnection processes and relaxed performance requirements, recognizing that system operators, utilities and project developers are all learning from these early projects.

The costs of submarine cable and shoreline interconnection are going to be disproportionately high for early projects, particularly if they are small. A number of pre-permitted development facilities have installed cabling that allow projects to connect at sea. The European Marine Energy Centre is currently the most developed example with the UK WaveHub, US’s WaveConnect and Nova Scotia’s

FORCE creating early array development opportunities. Development of this “plug and play” infrastructure can significantly reduce project costs and stimulate development activities at lower feed-in tariff prices.

## **Policy and Regulatory Enabling**

The decision to accelerate emerging energy developments can benefit from other mechanisms, beyond using interconnection infrastructure to reduce project costs to make lower feed-in tariffs effective.

Early projects are likely to attract delays and costs associated with requirements of regulators lacking experience with ocean energy. In effect, developers may be asked to provide research and analysis that may only be feasible based on the experience of a number of early projects. Regulators may require levels of project monitoring and research that answer a more general need than assessment of the individual projects. Feed-in tariffs will have to cover all of these costs, and their financing. These costs can be reduced by development of an adaptive management framework, creating mechanisms for shared research and facilitating permitting in ways that are appropriate to the early project- and industry-scale pilots. While not directly part of a feed-in tariff, facilitation of permitting and monitoring may reduce the level of feed-in tariff required.

## **Transition/Market Evolution**

A successful implementation of a feed-in tariff creates the market driver that is needed to encourage early project developments. That market pull acts as the precursor of what may become a natural market for mature renewable technologies. Project delivery teams that come together to use feed-in tariffs for early projects can build their experience with ocean energy development and may be the project development value chain that expands emerging energy as their technologies and operations improve.

The investment in supporting the early markets should grow the foundation of an industry that will eventually deliver additional renewable energy resources, in competition with those that are currently mature.

Given that wave, tidal and in-stream energy are in the early phase of the experience development/cost reduction curve, the feed-in tariff will be expected to pass through a number of phases with progressive reductions in the requirement for price support.

## **Implementation Risks**

The two principle risks associated with implementation of feed-in-tariffs are essentially under- and over-success. However the consequences of these two extremes may differ extremely in their impact. An ineffective feed-in-tariff, set too low to stimulate activity signals a fundamental misunderstanding of what wave, tidal and in-stream energy will need in order to become a competitive solution. This erosion of confidence in the developer community may be difficult to restore in any follow up tariff adjustments. An over-rich feed-in-tariff programme will show a high subscription interest quickly and will be easy to modulate by programme review.

## **Conservatism**



Concern that a feed-in tariff may be too rich and create stampedes, windfalls, and too high an impact on rates may send signals to regulators and utilities that cost control is the focus rather than development stimulus; despite the initial policy goals that committed to this development. If the concern is trying to minimise environmental challenges by slowing development, it may have the same inhibitory effect. There is a risk that this could lead to program rules that elicit little or no response. This *control* mandate is liable to totally undermine the need for programs that stimulate development, perhaps failing to recognise that the development will likely not occur without support. It does not recognise that those emerging energy development sectors have inherent controls on the rate of development in their insufficient technical experience, little manufacturing capacity, and extraordinary challenges in permitting and financing. In fact, the reason for using a feed-in tariff is to create market forces that may begin to compensate for these challenges and associated risks.

If the approach to setting a rate for the feed-in tariff is similar to that used for rate setting in commercial projects, it is likely to focus on deciding what are and are not eligible costs. Suggestions that R&D costs or permitting and project development costs cannot be contributions to rate determination are examples that emphasise that true costs of projects are not likely to be supported by this approach. The reality is that stimulating early projects needs capital support or market support, or both, that makes projects feasible. The market is going to have to cover everything from site assessment, through securing generators, their installation, operations and monitoring. It has to support the satisfaction of regulators and it has to mobilise finances. If a feed-in tariff is not set with the aim of triggering this delivery, it is likely to fail or deliver a few research-scale projects, but no obvious follow-through.

Rules, regulations and feed-in tariff design must embrace the objective of project delivery as the immediate priority. Creation of a risk-averse initiative takes the chance of failure in the objective of moving emerging energy opportunities like wave, tidal and in-stream into the available resource mix.

## Over-stimulation

The risk of overstimulation has been shown to be real, but for sectors with excess manufacturing capacity, a developed supply chain, access to finance and opportunities to have large numbers of projects at a highly feasible scale launch at the same time. The emerging renewables sectors present few candidates that meet this mix, and for these it may be best to use caps or managed calls.

For most emerging renewables it is possible to exercise due diligence and evaluate if and when each might get close to these risks. Rules, regulations and programs should not attempt to manage an overstimulation risk unless the risk appears to be real.

For wave, tidal and in-stream, this risk is minimal until experienced manufacturing and project delivery chains are developed. Even with successful feed-in tariff initiatives, this may take much of this decade.

## Risks from Delays or Failure in Feed-In-Tariff Implementation

If feed-in tariff rules, regulations and program fail to attract projects in ocean energy, or there are delays while there are modifications needed to make projects come forward, there is a risk that the limited international sector capacity is going to focus entirely on the first area that provides a combination of market support, facilitated access and encouragement of financing. It is possible that

the entire first generation of the sector might concentrate on Scotland, develop a value chain and launch Scotland into the principle supplier that Denmark has become for the wind industry. Delays will decrease the potential for economic benefits from the development of the wave, tidal and in-stream resources.

Delays will also decrease the potential for significant early development of Canada's resources. Even currently planned demonstrations could be delayed if proponents chose to focus development in areas where follow-on array-scale developments are more likely. If significant development is not launched in the next 3 years, there is a strong likelihood, particularly for wave and tidal, that Canada will wait out the first generation of development, and it might be late in the current decade before any sector development occurs here.

At its most basic, delays and missing out on the early stages in supply chain development for wave, tidal and in-stream energy may move Canada from a potential participant in the their economic opportunity and ensure that we assume the role of technology and service buyer, as has happened with many of the mature renewable energy sectors.

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s.22

[www.OREG.ca](http://www.OREG.ca)

<http://www.oreg.ca/docs/flash/index.htm>

Upcoming events - -

<http://www.oreg.ca/index.php?p=1> 19 Upcoming-OREG-Events

Campbell River Forum - May 25  
Annual Event - Montreal - November 1/2

Pages 196 through 205 redacted for the following reasons:

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s.13, s.14, s.17

## Phosy, Krisna SSBC:EX

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**From:** Brown, Chris FIN:EX  
**Sent:** Saturday, May 28, 2011 10:49 AM  
**To:** Fayad, Deborah FIN:EX; Milburn, Peter R FIN:EX  
**Cc:** Newton, Stuart A FIN:EX; Tannhauser, Ron R FIN:EX; MacLaren, Les MEM:EX  
**Subject:** PO Estimates Note - BC Hydro  
**Attachments:** PO Estimates Note.docx; ATT00001.htm; John Dyble - March 2011.docx; ATT00002.htm; PETER MILBURN.pdf; ATT00003.htm; Wenezenki Bio 2011.docx; ATT00004.htm; Consultant Bios.docx; ATT00005.htm

See attachments below for estimates note on BC Hydro review as well as bios on both panel members and consultants to the panel. This has been provided to the Premiers Office by Cheryl WY who had passed on the request from John Dyble to me.

I have not been told who will be ultimately paying the costs of the review but at this time they are being paid and accumulated by IAAS.

Chris

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[www.fin.gov.bc.ca/ocg/ias/ias.htm](http://www.fin.gov.bc.ca/ocg/ias/ias.htm)

Begin forwarded message:

**From:** Brown, Chris FIN:EX  
**Sent:** Thursday, May 26, 2011 9:28 AM  
**To:** Cochrane, Marlene EAO:EX  
**Subject:** PO Estimates Note - BC Hydro

As requested see attachments.

Chris

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# **BC HYDRO REVIEW**

## **RECOMMENDED RESPONSE:**

- **Government has appointed a panel to review BC Hydro and develop options to reduce the impact of projected rate increases on British Columbia families.**
- **The objective of the review is to find options to ensure costs are minimized and benefits to British Columbia families and BC Hydro customers are maximized.**
- **The panel members are:**
  - **Deputy Minister to the Premier, John Dyble;**
  - **Deputy Minister of Finance, Peter Milburn; and**
  - **Associate Deputy Minister of the Environmental Assessment Office, Cheryl Wenezenki-Yolland.**
- **The panel members have significant experience in managing large, geographically dispersed organizations that serve the public as well as managing large complex capital programs and financial budgets (see attached bios).**
- **The panel is to report back to the Premier and Minister of Energy and Mines by the end of June, 2011. The report and recommendations will be made public.**
- **The panel's recommendations will inform an amended BC Hydro rate application to the British Columbia Utilities Commission (BCUC).**
- **The panel is supported by staff from the Ministries of Energy and Mines and Finance as well as utilizing external consultants with expertise in government, large capital projects, electrical generation and utilities (see attached summary).**
- **The cost of the review is estimated at approximately \$125,000 in travel and contracted resources in addition to internal government staff time.**



## **BACKGROUND/STATUS:**

- On March 1, 2011, BC Hydro applied to the BCUC for a 9.73 percent rate increase in each of the next three years.
- Government announced a review of BC Hydro on April 7, 2011 to try to find ways to minimize rate increases while maximizing benefits to the Province, taxpayers and ratepayers.
- In particular, the panel will examine BC Hydro's financial performance, including:
  - Operating costs;
  - Cost containment strategies;
  - Capital planning and spending;
  - BC Hydro's forecasting system;
  - Procurement processes; and
  - Rate structures.
- The panel will also consider and look for potential savings in BC Hydro's organizational structures and business planning.
- The panel members are free to examine any other matters that may arise during the course of the review.
- The Government review does not replace the more detailed examination of BC Hydro's Revenue Requirements Application conducted by the BCUC which will resume following Government's review.

## **Contact:**

John Dyble,  
Peter Milburn or  
Cheryl Wenzenki-Yolland



**PETER MILBURN**  
Deputy Minister  
Ministry of Finance

Peter was appointed Deputy Minister and Secretary to Treasury Board of the Ministry of Finance on March 19, 2011. Peter has a B.A.Sc. in Civil Engineering from the University of British Columbia. Having worked in so many different locations across the province provides Peter with a unique understanding of the geographic diversity of British Columbia and the complex provincial challenges.

Peter began his career with the public service in 1983. His career has seen him work in a variety of positions throughout the province such as District Manager, Regional Manager and Regional Director in the Ministry of Transportation. Peter was part of the Olympic Bid Project in 2001 as Executive Director for the Sea to Sky Highway Improvement project in 2002. Peter's career brought him to Victoria when he was appointed to the position of Assistant Deputy Minister with the Ministry of Transportation and Infrastructure. Subsequently he was appointed Chief Operating Officer and the Deputy Minister.

Peter has lead numerous P3 projects including the Sea to Sky Highway Improvement project, WA Bennett Bridge, and the South Fraser Perimeter Road. He has extensive experience in capital programs and has chaired many capital boards including Transportation Investment Corporation, Interior Cardiac Board, and the Surrey Memorial Hospital reconstruction.



## **JOHN DYBLE**

### **DEPUTY MINISTER TO THE PREMIER AND CABINET SECRETARY**

John Dyble was appointed Deputy Minister to the Premier and Cabinet Secretary on March 14, 2011. In this position he is also the Head of the BC Public Service, the largest employer in the province with over 30,000 employees and more than 200 distinct fields of occupation. Previously, Mr. Dyble was the Deputy Minister of Health Services.

Before joining the British Columbia Public Service, he worked in consulting engineering at Sandwell Swan Wooster. As part of his consulting engineering work, he spent time in a number of countries, including Mozambique, Bangladesh, Cameroon and Turkey.

In 1989, he joined the Ministry of Regional and Economic Development. In 1993, he was appointed Regional Director the Vancouver Island/South Coast Region in the Ministry of Small Business, Tourism and Culture. John became the Assistant Deputy Minister of Planning and Major Projects at the Ministry of Transportation and Highways in 1997 and was subsequently appointed Assistant Deputy Minister of Highways in 2001. John was appointed Deputy Minister of Transportation in 2005 and served in that capacity until January 2009 when he was appointed Deputy Minister of Forests and Range. John was appointed Deputy Minister of Health Services in June 2009.

John has a Bachelor of Applied Science in Civil Engineering (1982) and is a Registered Professional Engineer. He also has a Masters of Business Administration. Both of his degrees are from the University of British Columbia.



**CHERYL WENEZENKI-YOLLAND  
ASSOCIATE DEPUTY MINISTER AND  
EXECUTIVE DIRECTOR  
ENVIRONMENTAL ASSESSMENT OFFICE**

Cheryl Wenezenki-Yolland is a seasoned public servant with over 25 years of diverse experience. Throughout her career, she has led or made significant contributions to the promotion of accountable government, driven by a desire to improve the effectiveness of government and the capacity of the BC Public Service.

In October 2010, Ms. Wenezenki-Yolland was appointed Associate Deputy Minister and Executive Director of the Environmental Assessment Office (EAO). The EAO is a neutral agency that oversees the review of major development in British Columbia. The office conducts both broad based and project specific assessments. The objective of the office is to ensure economic development under taken in the province is sustainable. Projects currently under review in the office represent over \$30 billion in potential capital investment to the province.

In 2006, Cheryl was appointed Comptroller General of British Columbia where she made significant contributions in the advancement of public sector accounting, financial management and reporting. She also conducted a number of significant program reviews making significant recommendations to improve the programs, such as the review of the Greater Vancouver Transportation Authority and the BC Ferries Authority and Corporation. Prior to the post as Comptroller General, she was the Assistant Deputy Minister of Finance responsible for Corporate and Ministry Support Services, as well as the Executive Financial Officer for the Premier's Office, the BC Public Service Agency and the Ministries of Finance and Labour & Citizens' Services. This followed terms as Chief Financial Officer for the same group of organizations and a significant term in Internal Audit and Advisory Services.

Before coming to the BC Public Service, Cheryl worked in organizations such as BC Transit and a short term with a school district. Cheryl's leadership is supported by a strong foundation of experience, education and understanding in strategy, financial and budget management, organizational effectiveness and teamwork.

Ms. Wenezenki-Yolland received her Certified Management Accounting designation in 1998 and in October 2007, Ms. Wenezenki-Yolland was awarded the Certified Management Accountant Fellowship (FCMA) for leadership within the accounting profession.

Cheryl has also been very active in her professional and volunteer activities. Ms. Wenezenki-Yolland is a current board member of the Victoria Chapter of the Financial Management Institute and former member of the Planning Advisory Committee for the Conference Board of Canada Chief Financial Officer's Network. Cheryl was recently appointed as a member of the Public Sector Accounting Standards Taskforce (PSAB) which will consider the accounting and reporting framework for all levels of government.

Cheryl played a key leadership role as Chair of the Joint PSAB/Government Working Team which undertook a review of the PSAB Conceptual Framework to identify opportunities to strengthen its relevance to senior governments in Canada, and is the basis for the newly formed PSAB taskforce.

Cheryl enjoys spending her leisure time with her husband and two young children and actively participates in a number of volunteer activities.

## **SUMMARY OF CONSULTANTS**

### **BDR Energy**

BDR is a leading independent Canada-based consulting firm specializing in advising on matters related to the electricity and natural gas industries. Our team members have served governments, regulators, consumers, transmission and distribution companies, electricity generators, integrated utilities, and prospective investors in major energy assets. Our consultants have been involved in the electricity sector for many years, both as external advisors and in senior management positions within the industry.

### **Frank Blasetti**

Frank Blasetti possesses a Masters of Economics from the University of British Columbia (1977) and has recently completed tenures as Assistant Deputy Minister, Partnerships, Ministry of Transportation and Infrastructure (9 years), President and CEO, Transportation Investment Corporation (2 years), and Vice-President, British Columbia Transportation Financing Authority (13 years). Mr. Blasetti has also served as a Director in the Crown Corporations Secretariat, Province of British Columbia (1993-1998), with responsibility for reviewing strategic initiatives proposed by or relating to Crown Corporations and monitoring the Corporations' performance; and has been a Manager in Treasury Board Staff, with responsibility for dealing with natural resource ministries and Crown Corporations.

### **Wayne Keiser**

Wayne Keiser has over 30 years senior level experience leading both public and private sector interests in the Transportation Infrastructure Sector. He previously held the position of Regional Director, South Coast Region; Ministry of Transportation + Infrastructure. Since 2004, Mr. Keiser has been a managing partner of Cobra Electric (South Coast) Ltd. where he performs the role of General Manager and Director of Business Development. Mr. Keiser is a graduate of the Applied Technology (Electrical) Program at BCIT; is a licensed Industrial Electrician as well as a registered Class "A" (Unrestricted) Electrical Contractor.

### **Lorne Sivertson**

Lorne Sivertson is President of Sivertson & Associates Consulting Ltd. located in Victoria, British Columbia, Canada. He has a B.A. and M.A. in Economics and has broad experience in the energy and resource sectors gained from work in industry, banking, government and consulting. Prior to forming his consultancy in 2006 Lorne Sivertson was the President and CEO of Columbia Power Corporation from 1994 to 2006. At Columbia Power he developed, permitted and purchased a combined total of 790 megawatts of run of river hydropower capacity. He has advised clients in a number of areas related to project development, including the negotiation of power project procurement contracts.



Pages 214 through 549 redacted for the following reasons:

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s.13, s.14, s.17  
s.13, s.16, s.17

## Phosy, Krisna SSBC:EX

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**From:** Woolley, Paul GCPE:EX  
**Sent:** Wednesday, August 10, 2011 3:04 PM  
**To:** Myers, Tobie A MEM:EX  
**Cc:** MacLaren, Les MEM:EX; Carr, Steve MEM:EX  
**Subject:** Materials  
**Attachments:** BC Hydro Review Briefing for Aug 11 v6.pptx; IN\_ Government Review of BCH Rates\_3 Aug 11 FINAL.docx; MA\_ Government Review of BC Hydro Release August 11 2011.docx; NR-BG\_review release\_adm pgm\_draft 8\_Aug 8 11.docx; QA\_Release of review \_ Aug 9 11\_draft 7.docx; SP\_ Government Review of BCH Rates\_10 Aug 11.docx

Will this cover you off.

OK to V5 the NR now?

You have any concerns with sharing these as finals with Hydro and the panel?

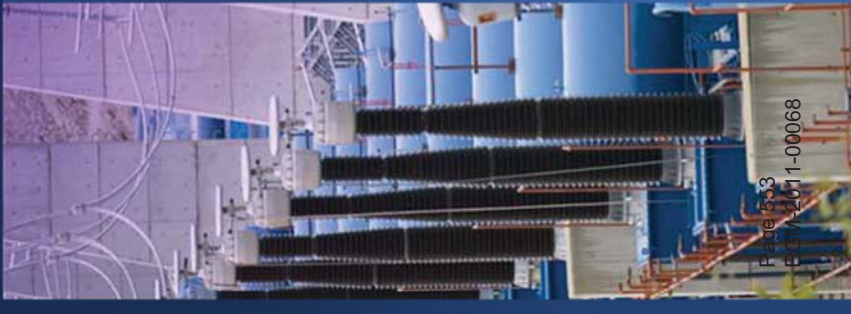
I owe you one more piece that will come your way shortly.



# REVIEW OF BC HYDRO

# The Problem

- BC Hydro's projected rate increases were too high
- Government struck this panel to look for ways to reduce these increases for B.C. families and businesses



# Review Scope



- Evaluated core aspects of the organization including:
  - Structure
  - Planning and forecasting
  - Procurement
  - Capital assets
  - Operating costs
  - Rate structures
- Examined specific policy areas such as:
  - Self sufficiency
  - Clean Energy
  - Independent power producers
  - Water rentals
  - Dividends/Capital Structure

# Evaluation



## ■ Positives

- Significant asset - generates relatively low cost power.
- Very service oriented culture.
- Executive and Board identified the need to change.
- Review accelerates the change.

## ■ Challenges

- Culture justified rate increases versus reducing core structural costs.
- Operating in silos reduced efficiency - further emphasized by BCTC merger.
- Over the past four years, the organization has grown significantly.
  - 41% increase from 3,976 → 5,615 FTEs (excluding BCTC integration).



# Evaluation *(cont.)*

## ■ Opportunities

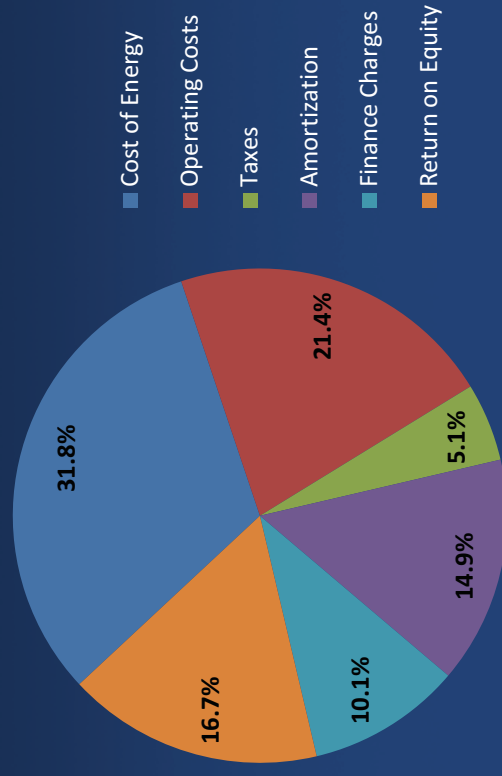
- Cost containment strategies need to be more aggressive, for overtime, flex time, bonuses, administration and overhead.
- Automated procurement would ensure greater value and more effective pricing.
- Capital project management needs stronger procurement choices and more effective risk transfer and cost controls.



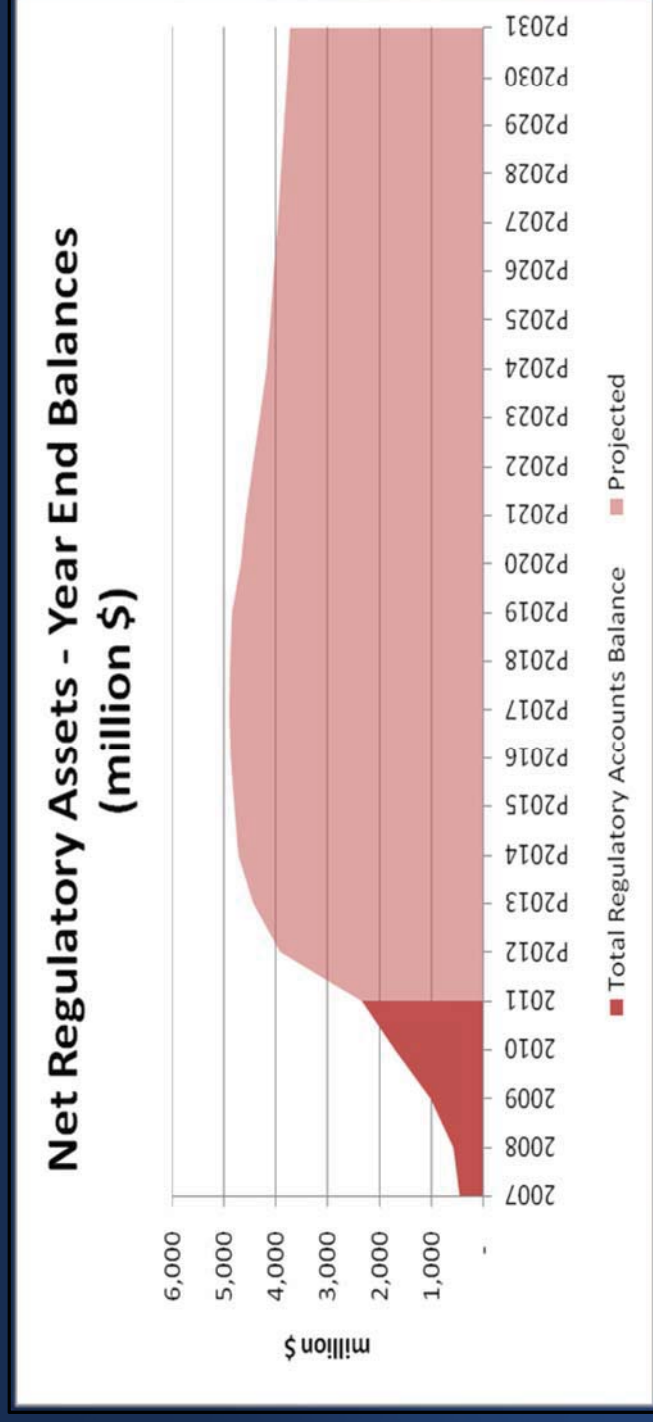
# Sources of Expenses and Ability to Effect Rates



- Total Expenses:  
\$3,581 M
- Forecasted Fiscal 2011 Expenses



# Impacts of Deferrals



# Capital Savings



- Planned capital driven by growth and ageing assets.
- Sustainability driven by policy direction.
- Postponing capital projects defers the rate pressure.
- Sustained change requires elimination of projects.
- No impact on rates in next 3 years impacts longer term.

# Policy Options



- Self-sufficiency
  - The economic and energy situations have changed.
  - Existing self sufficiency definition overly conservative.
  - Places an undue burden on ratepayers.
  - Recommend evaluating alternative definitions and timelines.
  - Goal to help customers long term.
- Clean Energy (93% carbon free)
  - Consistent with current climate change policy and objectives.
  - Respects carbon reduction targets.

# Policy Options *(cont.)*

- Water Rentals
  - Rates high in B.C.
  - BC Hydro only producer paying top tier.
  - Consider change as the economy improves.
  - Balance the needs of the province and the utility.



# Policy Options *(cont.)*



- Dividend policy
  - As the economy improves, determine a new dividend payout policy and capital structure.
- Rate Structures
  - Clarifying the objectives and priorities of design.
  - Review rate structure methodology.
  - Allocate costs among customer classes.
  - Ensure government priorities and objectives are supported.
  - Ask BCUC to confirm as part of its new rate structure review.

# Rate Reduction Options



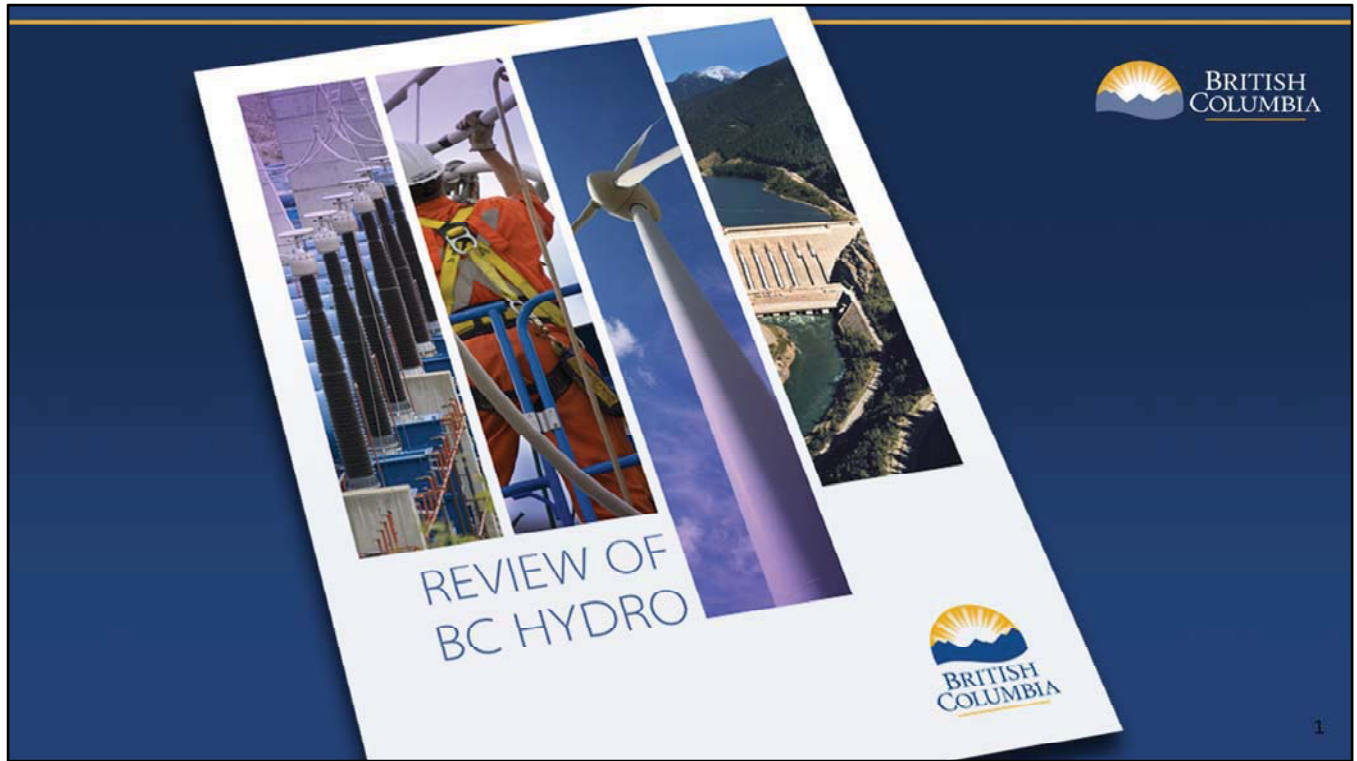
	F2012	F2013	F2014	3 Year Cumulative
Rate increase as filed in March 2011 (smoothed over 3 years)	9.73%	9.73%	9.73%	<b>32.1%</b>
Rate increase after Panel and BC Hydro identified initiatives (smoothed over 3 years)	5.9%	5.9%	5.9%	<b>18.9%</b>
Rate increase after initiatives (assuming 8% in F2012 as per interim rate increase and smoothed over F2013 and F2014)	8.0%	3.9%	3.9%	<b>16.6%</b>

# Summary



- Savings reduce the projected rate increase for fiscal 2012-14. Requires:
  - Operating cost reductions include workforce adjustment.
  - Greater efficiency across the organization.
  - Deferral of some costs and capital projects.
- **Recommendations**
  - Improve operating efficiencies in both short and longer term.
  - Strengthen capital planning, priorities and procurement practices.
  - Reduce future increases with offset deferrals.
  - Strengthen accountability.





# The Problem

- BC Hydro's projected rate increases were too high
- Government struck this panel to look for ways to reduce these increases for B.C. families and businesses



2

Current forecast rate increase of 9.73% per year for the next 3 years, with a cumulative effect of 32.1% over the 3 years.

Interim rate increase of 8.0% approved by BC Utilities Commission.

Given the impact of such a large increase on BC families and other ratepayers the panel was asked to conduct this review.



# Review Scope



- Evaluated core aspects of the organization including:
  - Structure
  - Planning and forecasting
  - Procurement
  - Capital assets
  - Operating costs
  - Rate structures
- Examined specific policy areas such as:
  - Self sufficiency
  - Clean Energy
  - Independent power producers
  - Water rentals
  - Dividends/Capital Structure

3

The review of BC Hydro looked at and evaluated core aspects of the organization including:

Organizational structure

Business planning and forecasting

Procurement

Capital assets

Operating costs

Rates

As well the review examined specific policy areas such as:

Self sufficiency

Clean Energy

Independent power producers

Dividends/Capital Structure

# Evaluation



## ▪ Positives

- Significant asset - generates relatively low cost power.
- Very service oriented culture.
- Executive and Board identified the need to change.
- Review accelerates the change.

## ▪ Challenges

- Culture justified rate increases versus reducing core structural costs.
- Operating in silos reduced efficiency - further emphasized by BCTC merger.
- Over the past four years, the organization has grown significantly.
  - 41% increase from 3,976 → 5,615 FTEs (excluding BCTC integration).

4

### **Positives**

BC Hydro is a significant asset to the Province of BC.

It generates relatively low cost power.

It has a very service oriented culture.

Executive and Board have identified the need to change and start the process.

This review indicates the need to accelerate the change.

### **Challenges**

Financial focus has been on justifying rate increases rather than reducing core structural costs.

BC Hydro has traditionally operated in a silo approach reducing efficiency. Further emphasized by the merger of BCTC.

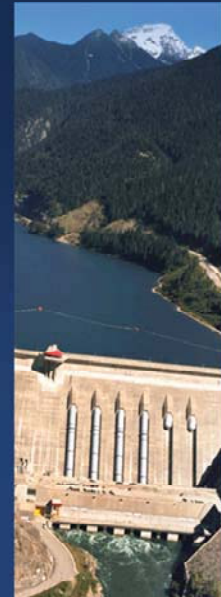
Over the past four years, the organization has grown significantly; between 2006 and 2010 there was a 41% increase from 3,976 → 5,615 FTE's (excluding BCTC integration).

# Evaluation *(cont.)*



## ▪ Opportunities

- Cost containment strategies need to be more aggressive, for overtime, flex time, bonuses, administration and overhead.
- Automated procurement would ensure greater value and more effective pricing.
- Capital project management needs stronger procurement choices and more effective risk transfer and cost controls.



### **Opportunities**

Cost containment strategies need to be more aggressive, specifically in the areas of overtime management, flex time, performance bonuses and corporate, administration and overhead.

Procurement is administratively intensive and requires a move to automated processes. A strategic sourcing strategy would be beneficial in ensuring greater value and more effective pricing.

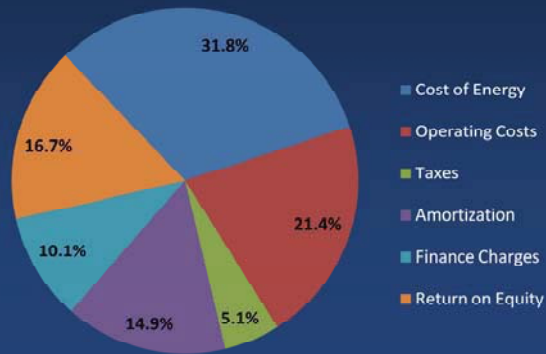
Capital project management needs stronger procurement choices and more effective risk transfer and cost controls.

# Sources of Expenses and Ability to Effect Rates



■ **Total Expenses:**  
**\$3,581 M**

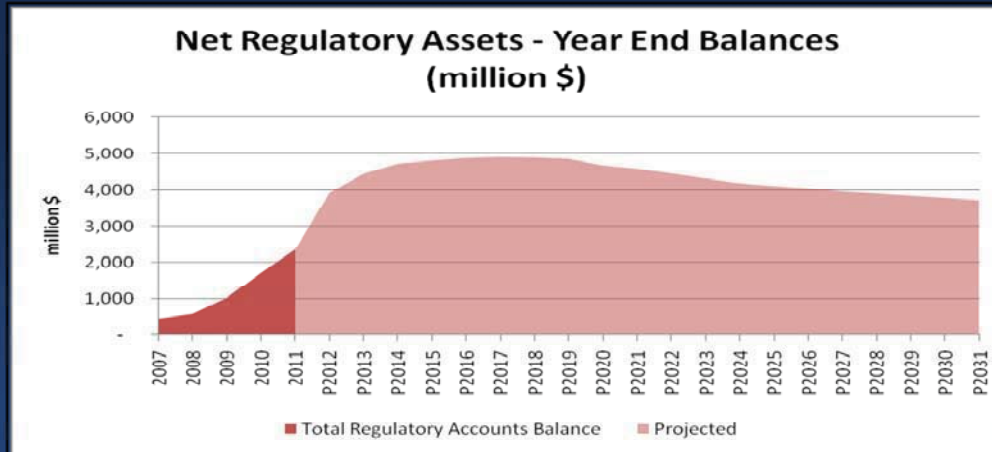
Forecasted Fiscal 2011 Expenses



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- A 1% reduction in rates requires operating costs be reduced by approximately \$35M (Fiscal 2012, \$72M (Fiscal 2013), and \$115M (Fiscal 2014).
- Capital assets, least impact in the short term, significant potential in the longer term. Eliminating capital projects totalling \$450M would achieve a rate impact of 1% from amortization (40 yr. period), finance charges, and dividend paid to government.
- Other categories of expenses, such as water rental rates and dividends require a change in government administrative policy and may impact the fiscal plan.
- Policy shifts generally do not impact rates over the next 3 years.

# Impacts of Deferrals



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- The use of deferral accounts minimizes short term rate increases but can, over the long term, significantly add to future rate pressures.
- Deferral accounts will grow from \$449M to a forecast \$4.9B in 2017.
- The postponement of capital projects will result in a similar depiction of future cost pressures.

# Capital Savings



- Planned capital driven by growth and ageing assets.
- Sustainability driven by policy direction.
- Postponing capital projects defers the rate pressure.
- Sustained change requires elimination of projects.
- No impact on rates in next 3 years impacts longer term.

8

Planned capital requirements are driven by growth and sustainability as well as policy direction.

Capital projects of \$800M, out of \$7.2B, will be deferred or reduced resulting in savings between 2012– 2014.

Postponement of capital projects defer the rate pressure, they do not eliminate it.

To effect a sustained change in rates would require the elimination of a capital project.



# Policy Options



## ▪ Self-sufficiency

- The economic and energy situations have changed.
- Existing self sufficiency definition overly conservative.
- Places an undue burden on ratepayers.
- Recommend evaluating alternative definitions and timelines.
- Goal to help customers long term.

## ▪ Clean Energy (93% carbon free)

- Consistent with current climate change policy and objectives.
- Respects carbon reduction targets.

9

No impact on rates in next 3 years.

Would be a critical consideration in keeping the rates reasonable after this next 3 years and in the long term.

### **Self-sufficiency**

The economic and energy situations have changed.

Existing self sufficiency definition may be overly conservative and place an undue burden on ratepayers.

Recommend evaluating alternative definitions and timelines for self sufficiency that meets the needs of the province and ratepayers in a way that is sustainable for the long term.

# Policy Options *(cont.)*



## ▪ Water Rentals

- Rates high in B.C.
- BC Hydro only producer paying top tier.
- Consider change as the economy improves.
- Balance the needs of the province and the utility.

10

Clean Energy (93% carbon free)

- Examined and concluded it is consistent with government's current climate change policy and objectives with respect to carbon reduction targets.

## **Water Rentals**

- Rates charged in BC are higher than in other Canadian jurisdictions.
- BC Hydro is the only power producer paying the top tier of rates.
- As the economy improves, BC Hydro and the province should work collaboratively to determine water rental rates which balance the needs of the province and the utility.

# Policy Options *(cont.)*



## ▪ Dividend policy

- As the economy improves, determine a new dividend payout policy and capital structure.

## ▪ Rate Structures

- Clarifying the objectives and priorities of design.
- Review rate structure methodology.
- Allocate costs among customer classes.
- Ensure government priorities and objectives are supported.
- Ask BCUC to confirm as part of its new rate structure review.

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### **Dividend policy**

Actual equity is 20 % but deemed to be 30% for dividend purposes thereby causing dividends to be paid on equity that is not there.

As the economy improves, BC Hydro and the province should work collaboratively to determine a dividend payout policy and capital structure that balances the needs of the province and the utility.

### **Rate Structures**

Recommendations include clarifying the objectives and priorities of rate structure design, reviewing rate structure methodology to allocate costs among customer classes and ensuring government priorities and objectives are supported.

The BCUC should confirm this as part of their review of the new rate structures.

# Rate Reduction Options



	F2012	F2013	F2014	3 Year Cumulative
Rate increase as filed in March 2011 (smoothed over 3 years)	9.73%	9.73%	9.73%	<b>32.1%</b>
Rate increase after Panel and BC Hydro identified initiatives (smoothed over 3 years)	5.9%	5.9%	5.9%	<b>18.9%</b>
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# Summary



- Savings reduce the projected rate increase for fiscal 2012-14. Requires:
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  - Greater efficiency across the organization.
  - Deferral of some costs and capital projects.
- **Recommendations**
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  - Strengthen capital planning, priorities and procurement practices.
  - Reduce future increases with offset deferrals.
  - Strengthen accountability.

13

In working with BC Hydro, savings have been identified to reduce the projected rate increase for fiscal 2012 – 14. This requires:

- operating cost reductions – adjust workforce by up to 1,000 positions over the next 3 years
- greater efficiency across the organization
- deferral of some costs and capital projects

Panel recommendations will result in BC Hydro improving operating efficiencies over the longer term, including stronger oversight for capital planning, priorities and improved procurement practices.

Amendments could be made to policy direction to slow and reduce future increases which would offset deferrals made to achieve the short-term rate reductions.

To strengthen accountability in regard to achievement of the savings the Panel recommends: BC Hydro executive provide their Board of Directors with a business plan that details the savings will be realized over Fiscal 2012-2014, as well as continued savings. Further, given the potential impact on government's overall debt and fiscal plan if targets not met, the Board Chair and CEO should provide interim progress reports to the Minister of Energy and Mines and Treasury Board.





## ADVICE TO MINISTER

**CONFIDENTIAL  
ISSUES NOTE**

**Ministry of Energy and Mines  
Date: August 10, 2011  
Minister Responsible: Coleman**

# BC Hydro Review

### ADVICE AND RECOMMENDED RESPONSE:

s.13

### SECONDARY MESSAGING:

s.13

## KEY FACTS REGARDING THE ISSUE:

On March 1, 2011, BC Hydro filed its most recent application with the BC Utilities Commission, seeking approval for rate increases of 9.73 per cent for each of the next three years, which translates into a cumulative increase of 32 per cent.

The rate increase prompted significant concerns from both BC families and other power consumers.

To address this concern, the Premier and Minister of Energy and Mines, requested a review of BC Hydro in order to provide recommendations and options for minimizing the rate increase. This was accomplished by examining both the operating and capital requirements of the corporation.

A comprehensive review followed, which included an examination of the government structure, business planning processes, financial performance including forecasting, procurement, general operation costs and the rate structures themselves. As well, the review examined a number of other key initiatives already underway within BC Hydro and the impact of government policy on the effective operation of BC Hydro.

On August 11, 2011, the review panel will make public a 120-page report with 53 individual recommendations.

The basic conclusion was that BC Hydro has done a relatively good job of providing electrical services to the residents of BC at low rates over the past 50 years, but in recent years BC Hydro's operating costs have been increasing.

To address the rising costs, the panel concluded BC Hydro can reduce costs through greater attention to operational processes, capital asset planning and management, and stronger approaches to procurement and project management.

Two options were recommended in the report: – one of 5.9 per cent per year for three years or a cumulative increase of 18.9 per cent and a second option that will be 8 per cent this year, with a 3.9 per cent increase in years two and three which would be a cumulative increase of 16.6 per cent over three years. The second option is the one that BC Hydro will put forward in its BCUC application.

As a result, BC Hydro will move on the recommendations, pending Board approval, and will be putting forward a revised application to the BC Utilities Commission later this year that will result in a much lower rate increase over the next three years.

BC Hydro will implement the recommendations into its business planning processes and report out regularly on progress to the province.

Communications Contact: Paul Woolley  
 Program Area Contact:  
 File Created: August 11, 2011  
 File Updated:

Comm. Director	Program Area	ADM	Deputy Minister	Minister's Office	CC:
<b>PW</b>	--	<b>LM</b>			

August 10, 2011

Ministry of Energy and Mines

### **MEDIA ADVISORY**

VICTORIA – The BC Hydro Review panel along with Minister Rich Coleman and CEO of BC Hydro, Dave Cobb, will be available for a technical briefing and government response regarding the recommendations flowing from a comprehensive financial and administrative review of BC Hydro.

The review panel, appointed in April 2011, consisted of John Dyble, Deputy Minister to the Premier; Peter Milburn, Deputy Minister of Finance; and Cheryl Wenezenki Yolland, acting Deputy Minister of Advanced Education.

Date: August 11, 2011

Time: 11:00 a.m. noon

Location:

Birch Room, #339, Third Floor, BC Legislature  
Victoria, BC

Media Conference calling information is:

1 877 353 9184

Passcode: s.17

Contact:

Jake Jacobs

Media Relations

Ministry of Energy and Mines and Minister Responsible for Housing

Ph: 250 952 0628

Cell: 250 213 6934

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## NEWS RELEASE

For Immediate Release  
[release number]  
[Date]

Ministry of Energy and Mines

### **BC Hydro to cut proposed rate increase in half following government review**

VICTORIA –Energy and Mines Minister Rich Coleman and BC Hydro CEO Dave Cobb announced today the crown corporation intends to file with the BC Utilities Commission for a 50 per cent reduction to its rate increases over the next three years.

The reduction to the proposed rate increase is designed to strike an appropriate balance between keeping rates down for B.C. families, and enabling BC Hydro to invest in the future infrastructure needs of the business.

The proposed reduction will be achieved through reduced costs, many of which are recommended in a comprehensive financial and administrative review of BC Hydro by a provincial government panel of senior officials that was released today.

The province and BC Hydro have agreed to ask the BC Utilities Commission to lower the earlier proposed annual rate increase of 9.73 per cent a year for the next three years to the current interim 8 per cent increase, followed by a 3.9 per cent increase for each of the following two years. This would reduce the cumulative impact of BC Hydro's proposed rate increase by approximately 50 per cent. The interim rate increase was added to BC Hydro's customers' bills earlier this year.

In responding to the provincial government's report, BC Hydro also intends to prepare a plan to implement the panel's recommendations. This plan will accelerate cost saving initiatives that are already underway as well as other efficiencies identified during the review process.

As a result, BC Hydro will reduce expenditures by \$823 million over three years in the areas of operating costs, deferred capital expenditures, updated trade income forecasts, deferred the impact of International Financial Reporting Standards and changing the amortization period for demand side management programs.

BC Hydro will submit its revised application to the BC Utilities Commission later this year.

In conducting the provincial government review, a panel of senior officials examined BC Hydro's financial performance, including operating and capital requirements, reliability of forecasting systems, administrative expenses, procurement processes, cost containment strategies and opportunities for savings. The panel also considered rate structures, corporate structures, business planning, and the impact of policy on BC Hydro.

The panel determined that BC Hydro has generally done a good job of providing electrical services to British Columbians at low rates, but the utility's operating costs have been increasing. They recommend BC Hydro can reduce rates through efficiencies and improvements in capital asset planning and management as well as stronger procurement processes.

In the area of policy, the panel recommends the Province and BC Hydro evaluate alternative definitions and timelines for government's self sufficiency policy. The panel also recommends further work be undertaken on cost allocation and rate design. As the economy improves, the province and BC Hydro will further examine its capital structure and dividend policy, as well as water rental rates.

**Quotes:**

Rich Coleman, Minister of Energy and Mines

"I would like to thank the panel for the report and recommendations. By prudently investing in our electricity system today, we can create a system that will enable us to keep electricity rates low for B.C. families in the long term."

Dave Cobb, BC Hydro CEO

"Today's announcement has found the right balance between the need to invest in our electricity system – which is the backbone of our economy – with the need to keep rates affordable for families and businesses."

**Quick Facts:**

- The review was led by a panel of senior officials, including deputy minister to the premier, John Dyble; deputy minister of finance, Peter Milburn and acting deputy minister of advanced education, Cheryl Wenezenki Yolland.
- BC Hydro will use the panel's recommendations to inform future business decisions and regulatory applications.
- BC Hydro operates 30 hydroelectric facilities and three natural gas fueled thermal power plants. About 80% of the province's electricity is produced by major hydroelectric generating stations on the Columbia and Peace Rivers.
- BC Hydro generates between 43,000 and 54,000 gigawatt hours of electricity annually, depending on annual water inflows.

**Learn More:**

- The report is available at: [www.newsroom.gov.bc.ca/downloads/bchydroreview.pdf](http://www.newsroom.gov.bc.ca/downloads/bchydroreview.pdf)

A backgrounder follows.

# BACKGROUND

## Significant recommendations to BC Hydro

- Provide a business plan to its Board of Directors that details savings to be realized over Fiscal 2012 2014, as well as continued savings in its next Revenue Requirements Application.
- Accelerate the pace and magnitude of change within BC Hydro to develop an organizational structure that keeps costs down and passes savings to British Columbians.
- Ensure the best options are applied to various procurement processes and the risks are allocated appropriately between BC Hydro and its vendors.
- Restructure the workforce by up to 1,000 employees over the next three years and work with unions to make collective agreements more aligned with other public sector agreements.
- Review the methodology with government that allocate costs among customer classes to ensure it supports government priorities and objectives for rates.
- Evaluate alternative definitions and timelines for self sufficiency so that they meet the needs of the Province and British Columbians in the long term.
- As the economy improves, work collaboratively with the province to re define the water rental rates charged to BC Hydro and determine a capital structure and dividend policies that balances the needs of the province and the utility.
- Ensure weighted and defined evaluation criteria are mandatory within competitive bid documents to improve transparency, promote consistency and enhance vendor relationships.
- Re evaluate its various conservation programs to reduce overall cost to British Columbians while still achieving value for money.
- Expedite full implementation of BC Hydro's technology projects.

Contact:

Jake Jacobs

Ministry of Energy

250 952 0628

250 213 6934 (cell)



## QUESTION AND ANSWERS

### Release of Government Review of BCH Rates

#### Draft 7

#### Rates

##### **How much are you reducing rates by and when will B.C. families see lower hydro bills?**

- The panel and BC Hydro have proposed to lower the earlier proposed annual rate increase of 9.73 per cent per year for the next three years.
- They are recommending ~~to retain~~retaining the 8 per cent increase that was added to customers' bills earlier this year, followed by a 3.9 per cent increase in each of the following two years.
- This would reduce the cumulative 3-year increase that BC Hydro applied for in March by almost one-half.
- BC Hydro will act on the recommendations of the panel and other measures that reduce and defer cost to revise its 2012-2014 revenue requirements application.
- The amended application will be submitted to the BC Utilities Commission later in 2011.

##### **Why are the rates still increasing? Didn't you make a promise to B.C. families to reduce rates?**

- Our commitment was to look at ways to reduce BC Hydro's proposed rate increases, in order to keep hydro rates as low as possible for BC families.
- With the Panel's recommendations and other measures proposed by BC Hydro that further reduce operating costs and defer other costs, it is estimated that the earlier proposed rate increase of 9.73 per cent for the next 3 years can be reduced by 40 to 50 percent.
- The fact is that B.C.'s electricity needs are increasing, and our existing power system is ageing and needs reinvestment to continue to deliver the reliable power British Columbians expect.
- Power and the cost of power affect all British Columbians. We want to find the right balance between investing in infrastructure to ensure clean, reliable electricity while keeping rates for B.C. families as low as possible. That is what we are doing right now.

**The report shows residential customers' rates are subsidized by commercial customers, and recommends addressing imbalances. Doesn't this go against the goal of reducing the impact of increases on families?**

- The report has identified that the original rate increases applied for by BC Hydro can be reduced between 40 and 50%. This is what we were looking for.
- In looking at rate structures, the panel identified that the rates paid by residential customers do not cover the costs of serving those customers.
- Our utility rates in British Columbia should be fair, just and reasonable, but the panel has identified some potentially conflicting objectives – for example conservation rates and reducing costs for families who tend to have higher power consumption.
- I have asked staff in the Ministry of Energy and Mines to undertake further analysis on this recommendation.

**Is government going to introduce time-of-use rates with Smart Meters?**

- The Province is not introducing mandatory time of use rates with Smart Meters, and these rates are not required to deliver net benefits to BC Hydro ratepayers.
- The Smart Metering and Infrastructure Business Case assumed that some customers would choose to voluntarily move to time of use rates.
- The report concludes that there are net benefits to customers even if the assumed take up on voluntary time of use rates does not materialize.

### **Release of Report**

**Why did you not release the report as soon as you received it on June 30<sup>th</sup>? Is government sanitizing it?**

- No, this is an in depth report examining BC Hydro's finances and administration, corporate structure, business plans, and rate structures and it is over 100 pages with over 50 recommendations.
- We needed time to consider the report and its recommendations and how to implement them.
- We have kept our promise and made the report public on the Ministry of Energy and Mines website.

## **Recommendations**

### **How are you going to implement the over 50 recommendations and by when?**

- Most of the recommendations are directed to BC Hydro. The recommendations, as well as other measures proposed by BC Hydro to achieve the reduced rate increase, will need some time to review them and to integrate them into a plan that will need to be approved by their Board. I have asked BC Hydro to develop a detailed implementation plan and provide regular progress reports specifying how the recommendations are being implemented.
- The review also made several recommendations to the Province related to energy policy (for example, reviewing how self sufficiency is defined), and I have asked Ministry of Energy and Mines staff to begin further analysis to address those recommendations.

### **Have you accepted all of the recommendations?**

- BC Hydro has just received the report and will need to review the final recommendations, however, we worked closely with the panel on the review and indications from them are that the recommendations are largely achievable.
- Some recommendations on policy, such as taking another look at self sufficiency and rate structures, will require more analysis and I have asked my Ministry staff to get going on those now.
- The Panel made other recommendations for government to consider as the economy improves, such as looking at water rental rates and BC Hydro's capital structure and dividend policy, which we will consider in the future.

### **Will BC Hydro staff be impacted?**

- Yes. BC Hydro had indicated that they plan to reduce staff levels by 350 over the three years of their March 2011 application. The review observes that BC Hydro's workforce could possibly be reduced by 17% (1,000 FTEs) over a three year period, and BC Hydro will need to determine ultimately what the right number is to find the right balance between affordable rates and the size of the team needed to operate the company and invest in the system.

### **How was the optimal size of BC Hydro at 4,800 employees arrived at?**

- BC Hydro's FTE count of 6,000 prior to outsourcing approx 1,400 plus FTE's to Accenture and a return to the current level of approx 6,000 FTEs would indicate excessive growth.
- There seems to be excessive numbers in some BC Hydro departments such as finance, HR, regulatory, communications, legal and engineering.
- Therefore, 4,800 employees seems a reasonable level.

### **Is this really a review of the Clean Energy Act?**

- No, this review is a financial and administrative review of BC Hydro, with a focus on identifying opportunities on how BC Hydro can reduce costs to keep electricity costs down for BC families.
- The review does include a recommendation for the Province to evaluate alternative definitions and timelines for self sufficiency, but does not recommend any changes to the *Clean Energy Act* or to B.C.'s energy objectives that are noted in the *Clean Energy Act*.

### **The report shows that the government is taking too much from BC Hydro. Why have you not reduced water rentals or dividends to provide more rate relief?**

- This review has resulted in reducing rate increases over the next 3 years by almost one half. That is a significant accomplishment.
- Like other commercial Crown corporations, BC Hydro earns a return to its shareholder, the people of BC. That return helps fund other services, like health care and education.
- Like other hydroelectric power producers in BC, BC Hydro also pays water rentals for use of provincial water resources.
- It is not a mystery that over the past 50 years, BC Hydro has been an instrument of public policy and source of revenues for governments of all stripes:
  - WAC Bennett created BC Hydro to deliver his "two rivers" policy.
  - In 1982, the SoCreds jacked up water rental rates which cost BC Hydro \$90M per year
  - In the 1990s, the NDP implemented dividends and rate freezes and rebates
  - In 2008, the current government increased the return on equity by \$50M to help address the deficit.
- There is a tension between reducing rates and creating impact on government's fiscal plan. The panel has identified a few areas that government consider when the economy improves and there may be more room in the fiscal plan. We will look at things like water rentals and dividend policy in the future.

**Regulatory accounts increased from \$449 million in 2007 to \$2.1 billion in 2011 and projected to go as high as \$4.9 billion in 2017. How can BC Hydro keep rates competitive in the long run with the continued growth in regulatory/deferral accounts?**

- To address this issue, the panel recommends that BC Hydro and the province work together to review the growth of regulatory accounts in order to keep rates competitive.
- The period of recovery or amortization of the regulatory accounts may vary. Due to this, it is challenging to understand its impact on future rates.
- We will be doing further work on this taking into account the findings of the Office of the Auditor General who is also looking at the regulatory accounts.

**Why are you moving forward with Smart Meters?**

- BC Hydro is well down the road with Smart Meters and is moving ahead with the project.
- Over 1,000 are being installed every day right now.
- It is a myth that Smart Meters are pushing up rates. In fact, the reverse is true; if we cancelled the Smart Meters, rates would need to rise.
- The business case shows that this project will deliver \$70 million in savings over the next three years alone, and even more once all the upgrades are made. That's why they need to move forward.
- The useful life of the Smart Metering & Infrastructure program (SMI) will be longer than the payback period of the SMI investment; this means that ratepayers will continue to receive cost savings from the investment even after the original investment has been recovered.

**Through the 2007 Energy Plan and the Clean Energy Act, government committed to shutting down Burrard Thermal. Why is it OK to use now? Aren't you just backtracking?**

- There is no change in government policy with respect to the Burrard Thermal facility. It is the panel's opinion that Burrard Thermal should continue to be maintained and only used for back-up and to support the transmission system.
- The 2007 Energy Plan committed government to phase-out Burrard Thermal by 2014 while allowing BC Hydro to retain the plant for "reliability insurance" should the need arise.
- A regulation under the *Clean Energy Act* in 2010 requires Burrard Thermal to be phased out in BC Hydro's planning as soon as new units at Mica and certain transmission upgrades are completed (anticipated in 2015 or 2016).
- The facility will still be available for back-up if there is a failure on our major transmission lines or generators in the interior.

**Why are you relying on a dirty plant like Burrard?**

- The issue with Burrard is greenhouse gas emissions. The plant has been retrofitted with scrubbers (selective catalytic reduction) that limit emissions of nitrogen oxides which contribute to smog.
- Having a large plant in the Lower Mainland demand centre to back up the system remains a good insurance policy.

**Are you changing the clean energy requirement? Does this mean government is backing down from its green agenda?**

- No, the Province remains committed to clean energy solutions, including its objective to generate at least 93 per cent of the electricity in BC from clean or renewable resources.
- The report notes that government's clean energy requirement has affected BC Hydro's ability to offer low cost electricity generation for B.C. ratepayers (by restricting the use of natural gas to a maximum of 7 per cent of generation).
- However, on balance the panel determined that the Government's clean energy objective was consistent with climate change policies and recommended no change.



### **Why are you not giving the BCUC back its full role?**

- This was not part of the review.
- The BCUC continues to have responsibility for setting BC Hydro's rates.
- The rate application, which was initially submitted on March 1, 2011, will now be revised as a result of the recommendations coming out of the Panel's review and other measures BC Hydro has proposed to further reduce operating costs and defer others, as well as boost trade income. BC Hydro is expected to submit an amended application to the BCUC later in 2011.
- Other than the exemptions included in the Clean Energy Act, BC Hydro must still get the BCUC's approval for its projects and contracts.

### **How much savings have been realized or will be realized with the BCTC integration?**

- In FY2010/11, there were savings from 144 staff and 20 consultant reductions and other reduction measures, but it was offset by the financial impact of integration such as severance, pension, administration and legal costs.
- FY2011/12 going forward, BC Hydro will realize 25.8 million savings every year.

### **The report recommends that BC Hydro reduce contingencies and reserves on its capital projects. Doesn't this increase risk and the likelihood that projects will go over budget?**

- To reduce project contingencies and reserve amounts, BC Hydro needs to more effectively allocate risk with its vendors, consider the use of more non traditional procurement models that optimize the transfer of risks and costs to the private sector, set firm project budgets and better manage its change order practices.

### **BC Hydro has been telling us for years that they need to re-invest in their system. Now this report recommends deferring \$800 million in capital projects. Isn't this going to mean BC Hydro's reliability will be compromised?**

- BC Hydro will conduct its own internal review to determine the \$800 million of capital projects to be deferred.
- BC Hydro is going to identify specific projects and focus on its safety and reliability issues.
- BC Hydro's methods used for the planning and prioritization of capital spending needs will serve to ensure lower levels of spending will not impact on system reliability.

### **Of the \$800 million deferred capital projects, what capital projects will be deferred?**

- Working with the panel, BC Hydro has identified a total of \$175 million capital additions that can be deferred, (including \$26.9 from the properties capital plan
- BC Hydro will identify an additional \$625 million reduction in project budgets.
- Part will come from cost controls and managing contingencies and resources that will go ahead. For example, \$90 million reserve, over and above \$60 million contingency, is included in the smart metre and infrastructure budget.

### **Does the adoption of International Financial Reporting Standards have an impact?**

- The adoption of International Financial Reporting Standards is expected to have minimal impact.
- BC Hydro's accounting will remain relatively unchanged from current practice.

### **Self- sufficiency**

#### **Are you changing self-sufficiency targets? Does this mean government is backing down from its green agenda?**

- No, the Province remains committed to clean, green energy solutions.
- What may change is the definition of self sufficiency, which in turn would affect how soon BC Hydro may need new sources of clean energy.
- The review recommends that the Province and BC Hydro evaluate alternative definitions and timelines for self sufficiency that meet the needs of the Province and ratepayers in a way that is sustainable for the long term.
- I have instructed my Ministry staff to commence the review of self sufficiency at once.

**You have talked a lot about the volatility of the electricity market, why are you now moving towards buying power from the spot market rather than building it in BC?**

- A decision to place greater dependence on the spot market for energy purchases has not yet been made.
- The volatility of the spot market will be one of the factors taken into consideration as part of the Province's review of self sufficiency.
- That being said, over the past few years the emergence of new supplies of unconventional natural gas have reduced both natural gas and electricity market prices, as well as the volatility in those markets. These conditions are expected to persist over the medium term.

**Why did you just announce the successful proponents for the Bioenergy Phase 2 Call if you are now moving to market based power? Why not just grant greater access to the market?**

- The Bioenergy Phase 2 Procurement was under way and has resulted in competitively priced firm energy that compares favourably with the most recent clean power call (\$115/MW.h vs \$127/MW.h (2010 dollars)).
- The Bio Phase 2 Call fulfills our commitment to forest dependent communities to get them investment and jobs;
- BC Hydro's analysis is that bioenergy projects create twice the economic impact and employment compared to wind or run of river;
- The costs of this procurement were already in BC Hydro's forecasts, and will not impact the results of the BC Hydro review.

**Do we still need Site C?**

- Site C is a cost effective source of clean energy. At \$87-95 per MWh, Site C's cost of energy compares favourably with other benchmarks for clean energy, and would take advantage of water already stored in the Williston Reservoir to deliver firm energy.
- If approved, Site C would provide up to 1,100 MW of capacity, and produce about 5,100 GWh of electricity annually, enough to power more than 450,000 homes per year.
- Site C costs will not impact rates until the project is in-service (anticipated earliest date 2020) or discontinued. While BC Hydro projects expenditures (including interest) for Site C over the next 3 years to be \$425 million, these costs will be deferred and recorded in a Site C Regulatory Account, and therefore do not have an impact on rates at this time.
- Site C is currently undergoing an environmental assessment. No final decision will be made to proceed with Site C until that process is completed.

### **Does this mean you will no longer enter into Energy Purchase Agreements with expensive IPPs?**

- The decision on when to hold the next call for power will be made following review of BC Hydro's Integrated Resource Plan, which is currently underway and will be submitted to the Province in 2012.
- Part of the Panel review included an examination of the effectiveness of procurement approaches.
- We want to make sure BC Hydro has the processes in place to get maximum value for money, whether it's an agreement to purchase clean, renewable electricity or a fleet of hydro repair trucks.
- The government supports the IPPs. They generate jobs, promote economic development and assume contractual obligations and risks when they enter into Energy Purchase Agreements with the BC Hydro.

### **Procurement**

#### **The report recommends consolidating procurement. Will this shut out local suppliers and lead to larger out-of-province firms getting all of the contracts?**

- The government has made commitments under trade agreements to ensure open competition. The intent behind these trade agreements is that preferential treatment to local suppliers will not be given. BC Hydro is required to follow these trade agreements, as such; they do not discriminate against out-of-province vendors by restricting access to government procurement opportunities. Likewise, the Province's trade partners are not able to discriminate against British Columbian vendors.
- There will still be ~~opportunities~~opportunities for local firms on projects either direct or sub-contract.

### **Implementation**

#### **Can BC Hydro realistically make these cuts?**

- The panel had extensive discussions with BC Hydro in developing its recommendations. While the cost reductions recommended by the panel as well as others that have been proposed by BC Hydro that lower capital costs, defer capital projects and other costs, will be challenging, BC Hydro believes they are achievable.

**Will cutting rates this dramatically affect BC Hydro's ability to provide reliable service to British Columbians?**

**OR**

**With the recommendation to cut overtime, how will crews be able to quickly restore service after storms and other interruptions?**

- The panel had extensive discussions with BC Hydro in developing its recommendations and considering the other measures BC Hydro was proposing. While the cost reductions will be challenging, BC Hydro believes they are achievable and will not impact reliability.

**Will cutting rates this dramatically affect BC Hydro's ability to provide good day to day customer service to British Columbians?**

- The panel had extensive discussions with BC Hydro in developing its recommendations. While the cost reductions will be challenging, BC Hydro believes they are achievable and will not impact customer service dramatically. What it will do is encourage BC Hydro to continue to seek out ways to provide customer service in the most cost effective way.

**How will the rate cuts, reduction in workforce, and deferral of capital projects impact BC Hydro's safety risks?**

- BC Hydro provides reliable and safe electricity services to BC residents at low rates.
- BC Hydro is committed to the safety of its staff and customers. Through strong planning and prioritization of capital planning, BC Hydro expects to implement the recommendations without compromising its commitment to safety.

**What if the BCUC thinks you have gone too far with the cuts to rates?**

- The BCUC will conduct an open, public review of BC Hydro's revised revenue requirements application and provide its assessment after that process.

**The review recommends making adjustments to collective agreements with BC Hydro's unions. The Liberal government has gotten in trouble in the past for tearing up collective agreements. Why even go there?**

- This is not about tearing up collective agreements.
- The panel recommended BC Hydro work with its unions to facilitate changes required to allow BC Hydro to manage their resources in a cost effective manner and to the benefit of BC Hydro customers.
- The Review has identified some compensation issues at BC Hydro that are outside public sector norms.
- BC Hydro and its unions will need to address these in the next round of collective bargaining.

**Why is the review recommending outsourcing more work from BC Hydro's unions to private contractors?**

- BC Hydro has already achieved significant savings from its agreement with Accenture (on track to exceed \$250M over 10 years)
- The report found that in some areas there was excessive overtime, and recommended that BC Hydro look at contractors to see if the work can be done at lower cost.
- The review also found that BC Hydro should negotiate more flexibility in the union contracts to address these issues.
- This is a reasonable recommendation to try to lower costs and rates for BC Hydro's customers.

## **Review and Process**

**Why did you call this review?**

- This review is timely, as we have a new Premier, we have a new Minister, and it has been 10 years since government conducted a significant review of BC Hydro's structure, operations and business plans.
- We want to make sure we're doing everything possible to help BC Hydro find ways to reduce rate increases. And we want to move quickly as we want to minimize any delay to the BC Utilities Commission's rate review process.
- Periodic reviews can help Crown agencies to better meet the financial and service expectations that of their shareholders – the people of British Columbia.

**Why did you do an internal review, wouldn't it be better to have some outside party like the Auditor General or the BCUC conduct this review?**

- Time is of the essence and this builds on our recent experience with reviewing other public sector organizations. We have some very talented and knowledgeable staff at the Ministry of Finance and the Ministry of Energy and Mines.
- This approach is also much more cost effective than hiring outside consultants to do the review, although the terms of reference did allow for some specialized advisors to be hired, if required.
- At the end of the day, the revised BC Hydro rate application will be thoroughly reviewed by the BC Utilities Commission through its open, public hearing process.

**What qualifications and experience do the panel members have for this review process?**

- John Dyble, Deputy Minister to the Premier, is a Registered Professional Engineer. He was the Deputy Minister for the Ministry of Transportation and Infrastructure where he managed large capital projects in communities throughout B.C. Dyble also worked in the Ministry of Regional and Economic Development for over seven years and is well aware of the regional and economic issues that BC Hydro faces. Perhaps also note former DM of Health.
- Peter Milburn, Deputy Minister of Finance, is also an engineer (is he registered as well). He was the Deputy Minister of Transportation and Infrastructure and the executive director of the Sea to Sky Highway Improvement Project. Like, Dyble he is very experienced in managing large, regional capital projects.
- Cheryl Wenezenki Yolland, acting Deputy Minister of Advanced Education, former Associate Deputy Minister of the Environmental Assessment Office and is a Certified Management Accountant, giving her an understanding of environmental issues across the province and financial expertise. She was the former Comptroller General of British Columbia where she conducted many program reviews, including the review of the BC Ferries, Translink and Vancouver School Board.



**Which external advisors were hired and at what cost?**

<i><b>Consultant</b></i>	<i><b>Invoiced</b></i>
Wayne Keiser	\$9,240.00
Frank Blasetti	3,237.50
Lorne Silvertson	12,887.28
BDR North American	19,300.00
<b>Total</b>	<b>\$44,664.78</b>

- Four consultants with expertise in the electricity sector, capital management, procurement and electricity contracts were used at a total cost of under \$50,000. **PLEASE DO NOT DISCLOSE INDIVIDUAL AMOUNTS.**
- (Biographies are in appendix A)

**So how is a closed door, internal government review in keeping with the Premier's commitment to open government? Why did the public not get a chance to participate in this review?**

- We want to make sure we're doing everything possible to help BC Hydro find ways to reduce rate increases. Time is of the essence as we want to minimize any delay to the BC Utilities Commission's review process.
- The panel's report has been made public.
- The review will help inform public discussions in key public processes such as at the BC Utilities Commission hearings or the consultation process on BC Hydro's Integrated Resource Plan.
- Submissions were received from a variety of stakeholders including IBEW, COPE, ratepayer groups, Clean Energy BC, line contractors and others.

### **What happens to the interim rate increase now?**

- A detailed rate examination will be conducted by the BCUC after BC Hydro submits its amended Revenue Requirements Application, which we expect before year end.
- If the Utilities Commission approves lower rates, then BC Hydro customers will get a refund with interest.

### **How will this review impact BC Hydro's Integrated Resource Plan?**

- Most of the review panel's recommendations will not directly impact BC Hydro's IRP.
- However, it is possible that the report's recommendations to reduce rates, and to reduce capital additions by a total of \$800 million, may have a small impact on BC Hydro's Integrated Resource Plan.
- If changes are made to the self sufficiency definition, they could impact BC Hydro's energy procurement schedule.

### **BC Ferries underwent a review in 2009 which determined that it was a well-run organization, but it is still implementing massive rate increases. It doesn't look like this review has accomplished much. What is the value of these types of review?**

- The two reviews are very different. The review of BC Ferries in 2009 looked at its delivery model to ensure that British Columbians are receiving value. The comptroller general found that the company is well managed overall.
- This review of BC Hydro and develop options to reduce the impact of hydro rate increases on B.C. families.

### **Is this the approach you'll take for reviewing BC Ferry rates or MSP premiums?**

- I can't speak for what process the government might take on issues like ferry rates or MSP premiums. You need to match the right process given the specific issues you are dealing with.
- The process we are using here reflects out our recent experience with reviewing other public sector organizations.
- We have some very talented and knowledgeable staff at the Ministry of Finance and the Ministry of Energy and Mines. This approach is also much more cost effective than hiring outside consultants.

## **Appendix A**

### **BDR Energy**

BDR is a leading independent Canada-based consulting firm specializing in advising on matters related to the electricity and natural gas industries. Team members have served governments, regulators, consumers, transmission and distribution companies, electricity generators, integrated utilities, and prospective investors in major energy assets. Consultants have been involved in the electricity sector for many years, both as external advisors and in senior management positions within the industry.

#### **Frank Blasetti**

Frank Blasetti possesses a Masters of Economics from the University of British Columbia (1977) and has recently completed tenures as Assistant Deputy Minister, Partnerships, Ministry of Transportation and Infrastructure (9 years), President and CEO, Transportation Investment Corporation (2 years), and Vice-President, British Columbia Transportation Financing Authority (13 years). Mr. Blasetti has also served as a Director in the Crown Corporations Secretariat, Province of British Columbia (1993-1998), with responsibility for reviewing strategic initiatives proposed by or relating to Crown Corporations and monitoring the Corporations' performance; and has been a Manager in Treasury Board Staff, with responsibility for dealing with natural resource ministries and Crown Corporations.

#### **Wayne Keiser**

Wayne Keiser has over 30 years senior level experience leading both public and private sector interests in the Transportation Infrastructure Sector. He previously held the position of Regional Director, South Coast Region; Ministry of Transportation + Infrastructure. Since 2004, Mr. Keiser has been a managing partner of Cobra Electric (South Coast) Ltd. where he performs the role of General Manager and Director of Business Development. Mr. Keiser is a graduate of the Applied Technology (Electrical) Program at BCIT; is a licensed Industrial Electrician as well as a registered Class "A" (Unrestricted) Electrical Contractor.

#### **Lorne Sivertson**

Lorne Sivertson is President of Sivertson & Associates Consulting Ltd. located in Victoria, British Columbia, Canada. He has a B.A. and M.A. in Economics and has broad experience in the energy and resource sectors gained from work in industry, banking, government and consulting. Prior to forming his consultancy in 2006 Lorne Sivertson was the President and CEO of Columbia Power Corporation from 1994 to 2006. At Columbia Power he developed, permitted and purchased a combined total of 790 megawatts of run of river hydropower capacity. He has advised clients in a number of areas related to project development, including the negotiation of power project procurement contracts.

# BC HYDRO REVIEW

Birch Room, # 339

Third Floor

British Columbia Legislature

Thursday August 11, 2011

Event Time: 11:00am

Time	Event Itinerary
8:00am	Event set up. Mediaco and Sheryl on site
10:45am	<p>Event PreBrief for Technical Panel. Facilitated by Sheryl</p> <p>Location: Hallway outside of Birch Room</p> <p>Technical Panel:</p> <ul style="list-style-type: none"><li>Cheryl Wenezenki-Yolland, Acting Deputy Minister, Ministry of Advanced Education</li><li>Peter Milburn, Deputy Minister, Ministry of Finance</li></ul> <p>Stage Guests:</p> <ul style="list-style-type: none"><li>Hon. Rich Coleman, Minister of Energy and Mines</li><li>Dave Cobb, CEO of BC Hydro</li></ul>
10:45	<p>Media</p> <ul style="list-style-type: none"><li>briefed on event rollout and procedures upon arrival</li><li>Communication materials distributed</li></ul>

11:00 – 11:12am	<b>REPORT PRESENTATION</b>  <b>Cheryl Wenezenki-Yolland</b> <ul style="list-style-type: none"> <li>• Introduces herself and the Technical Panel</li> <li>• Presents remarks accompanied by a PowerPoint presentation</li> </ul>
11:12 – 11:27am	<b>Question and Answer Session</b> <ul style="list-style-type: none"> <li>• Paul conducts a briefing on protocols</li> <li>• Questions to come from media on site and on the regional call in lines</li> <li>• Sheryl monitors media call in lines and hand held microphones</li> <li>• Cheryl W. directs questions to appropriate Panel Member to respond</li> </ul>
11:27am	<b>Technical Panel</b> departs from Stage area
11:28am	<b>GOVERNMENT RESPONSE</b>  <b>Minister Rich Coleman and Dave Cobb</b> proceed to stage area
11:29am	<b>Minister Coleman</b> proceeds to podium <ul style="list-style-type: none"> <li>• Introduces himself and Dave Cobb</li> <li>• Presents remarks</li> <li>• Invites Dave Cobb to podium</li> </ul>
11:34am	<b>Dave Cobb</b> presents remarks
11:39am	<b>Question and Answer Session</b> <ul style="list-style-type: none"> <li>• Same format as the Panel Q &amp; A</li> </ul>
11:55am	<b>Session ends</b>

## **DRAFT**

### **BCH Report Release**

#### **Key Messages:**

- Premier clear government and Crowns adopt holistic approach to costs they impose on British Columbians.
- The Premier's focus -- build economy and but not burden families.
- Make sure crowns continue to make prudent investments that support job creation, reliability, but keep Hydro rates among lowest in North America.
- I support these priorities and pleased to confirm, with BC Hydro CEO Dave Cobb, that the rate increase will be filed at 50% less than what it had been planned.
- This is a win for families and an accomplishment for the panel as well as everyone at BC Hydro who worked hard to make it possible.
- Thank the panel – John Dyble, Peter Milburn and Cheryl Wenezenki-Yolland for delivering review – quite comprehensive.
- It examines finances and administration, corporate structure, business plans, and rate structures.
- The recommendations set stage for a new culture at BC Hydro.
- Recommendations and other measures – which Dave Cobb can speak to more directly , and go even further, will reduce the cumulative impact of proposed

- Hydro's CEO Dave Cobb is here today, and he assures me this reduction, while challenging, is achievable.
- As report states, Hydro is doing a good job and had already started to implement efficiencies and cost savings.
- Report recognizes that, and encourages Hydro to accelerate pace and continue efforts to become the most efficient utility in North America.
- Dave also assures me Hydro is prepared to work with the Province to support the Premier's direction by implementing recommendations along with other measures to bring the rate increase down.
- Means that Hydro will put forward revised rate request to BCUC.
- Panel drew on expertise of auditors and policy analyst who worked with BC Hydro.
- Hydro went further and beyond the recommendations to cut costs, defer projects and manage finances.
- Have found a balance to keep rates down, but let Hydro still invest in infrastructure of the business, and continue to plan for the electricity needs of the future.
- Through this approach, optimistic we can ensure clean, reliable electricity is available at lower costs.
- Today is good first step but still is work ahead.



- Shifting business philosophy and culture.
- This won't compromise safety but ensures British Columbians continue to enjoy clean, reliable electricity systems on the continent.
- Hydro will rethink their HR plans including staffing and compensation levels.
- Engineering costs need to be reduced. Tighter controls on discretionary travel and business expenses required.
- Overtime needs to be reduced with an eye for not only reducing costs but improving safety.
- Owe it to families to keep our workers safe on the job, and excessive overtime is in direct conflict with workplace safety.
- Procurement practices need to be modernized.
- Capital program analyzed to determine which projects can be deferred ... even by a few months.
- Need to keep rates down but in a manner that maintains service standards and still enables Hydro to reinvest in their business and modernize the grid. Work has already begun.
- Government must also do its part. We owe it to Hydro to take a closer look at existing policies that creates business environment that enables Hydro to drive down the costs for rate payers.
- Province recognizes it charges Hydro a premium for water rates and we're ready to work to address that.

- Take a hard look at these two policies and others moving forward. Work with Hydro set more business favourable conditions for their business.
- All governments have used BC Hydro as an instrument of public policy and to generate revenue over its 50 years of operation.
- They are a treasured asset not only for the province but also for its people.
- With this, I am proud today to say government accepts the recommendations put forward by the panel today.
- By working together, we can create a stronger BC Hydro, and keep rates down for British Columbia families and businesses.
- Now, over to BC Hydro's CEO Dave Cobb.