

BACKGROUNDER

Independent Power Producer (IPP) Projects in British Columbia

Prepared by West Coast Environmental Law



The Climate Change Context

According to the United Nations Intergovernmental Panel on Climate Change (“IPCC”), the warming of the earth’s climate system is now unequivocal.¹ If global warming continues to occur unabated, it appears that we will face significant environmental, social and economic disruption and damage. We are already seeing an example of this in British Columbia, as warmer winters have contributed to the mountain pine beetle epidemic that has ravaged more than 13 million hectares of BC’s forests.²

In order to take steps to mitigate climate change, the BC government introduced legislated greenhouse gas (GHG) emission reduction targets in November 2007.³ Pursuant to the legislation, the province must reduce its GHGs by 33 percent or better by 2020, and by 80 percent or better by 2050 (as compared to 2007 levels).

The energy choices that BC makes going forward will significantly determine whether we can meet, or exceed, our legislated targets.

For example, the “upstream” oil and gas sector is responsible for emitting approximately 20 percent of the province’s total GHGs.⁴ Volumes more of GHGs are emitted “downstream” when oil and gas products are burned for fuel, such as gasoline in vehicles: the transportation sector is responsible for emitting almost 40 percent of BC’s GHG emissions.⁵ It is clear that we must find a way to reduce our reliance on fossil fuels.

In contrast, electricity production currently accounts for only about 2 percent of BC’s GHG emissions.⁶ This is because most of our electricity is generated by large hydro-electric dams built decades ago on the Peace River in north-east BC and on the Columbia River in southeast BC. While not without their own substantial environmental/cultural impacts and controversy, these are climate friendly electricity sources.

However, the ability of these dams to meet our electricity needs is becoming constrained, as BC Hydro is projecting a significant increase in demand for electricity in BC over the next 20 years. This means that we must find new solutions if we want to avoid importing “dirty” electricity (such as coal fired) from our neighboring jurisdictions.

¹Fourth Assessment Report (2007)

²David Suzuki and Faisal Moola, “How the mountain pine beetle devastated B.C.’s forests” Georgia Straight.com (March 6, 2008), online at: <http://www.straight.com/article-144643/david-suzuki-little-bug-big-problem>; BC Government, Climate Action Plan (July 2008) at pg. 8.

³Greenhouse Gas Reduction Targets Act [SBC 2007] c. 42.

⁴BC Climate Action Plan at pg. 25.. See note 2.

⁵BC Climate Action Plan at pg. 25.. See note 2.

⁶BC Climate Action Plan at pg. 25.. See note 2.

The Clean/Renewable Energy Answer

There is no question that reducing our demand for electricity through increased conservation and energy efficiency efforts are two of the key solutions.

A third is transitioning from fossil fuels to “clean” and “renewable” energy sources, such as small hydro, wind, solar, ocean and geothermal. Governments in jurisdictions throughout the world recognize this and are taking steps to cultivate their clean/renewable energy sectors. For example, many US states have mandated “Renewable Portfolio Standards” which require their electric utilities to obtain a percentage of their electricity from clean/renewable sources. California, a leader in this area, recently mandated that its utilities reach the 33 percent goal by 2020.

The Clean/Renewable Energy Controversy in British Columbia

The BC government stipulated in 2002 that new clean/renewable energy generation in this province will be developed by “independent power producers” (IPPs), not BC Hydro (save for large hydro-electric facilities). The role of the private sector in developing BC’s “public” resources⁷ is just one of the more controversial issues that British Columbians are currently grappling with as we usher in the green economy (others are summarized in *Question 11* below).

West Coast Environmental Law believes that British Columbians deserve to have a strong voice in the decision-making processes around IPP projects. The purpose of this backgrounder is to provide accurate and balanced information about IPP projects so that BC’s citizens can make informed decisions about our collective choices going forward.



1. What are Independent Power Producer projects?

The two most common types of independent power producer (“IPP”) projects currently being developed in BC are “run-of-river” and wind projects. IPPs could also develop other sources of energy such as ocean, geothermal and bio-energy.

By definition, IPPs are independent from government and are power producers rather than self-generators.⁸

As power producers IPPs generate electricity to sell. Currently, the electricity produced by IPPs in BC is sold almost exclusively to BC Hydro.⁹ (We discuss the possible export of this electricity in *Question #7* below.)

In contrast, self generators (like pulp mills and mines) produce electricity primarily for their own industrial use.¹⁰

2. Who can be an Independent Power Producer?

IPPs can be private or public companies; municipal and regional governments; First Nations communities; cooperatives; private individuals; and other entities.¹¹

While there are examples of First Nations¹² and cooperatives¹³ having an ownership role, IPP projects are typically very expensive to develop and most are owned/operated by for-profit companies. In some cases, multi-national companies are involved in developing IPP projects in BC.¹⁴



3. What is the history of IPP project development in British Columbia?

BC Hydro first began requesting new generation projects from IPPs in the late 1980s. Almost half of the IPP projects in operation in BC (as of late 2008) were built prior to 2001 under previous provincial governments.¹⁵

Since 2001, several policy and regulatory changes have been implemented that have rapidly accelerated IPP development in BC. For the most part, these policy changes are set out in the 2002 and 2007 BC Energy Plans.

Key policy directives set out by the government in the 2002 Energy Plan include the following:

- The private sector will develop new electricity generation, with BC Hydro being restricted to improvements at its existing generation plants (and large-scale hydro-electric facilities like the Site C Dam).
- A separate company—the BC Transmission Corporation (“BCTC”)—will be formed to manage, operate and maintain BC’s transmission system. These functions were previously the responsibility of BC Hydro.¹⁶ The stated purpose of forming BCTC was two fold:
 1. To improve access to the transmission system for all electricity generators in BC. This was done, at least in part, in order to conform with new market rules in the US that required an independent entity—separate from generation and distribution—to control the transmission system;²⁰ and
 2. To enable IPPs to sell directly into the regional/US wholesale markets and to compete with distributors (such as BC Hydro) to serve all or a portion of large consumer’s requirements.²¹

The 2007 BC Energy Plan contained several policy directives by the government relating to clean/renewable electricity development, climate change mitigation and security of energy supply that entrenches BC’s future reliance on IPP projects.

⁷These lands and waters are also subject to constitutionally protected Aboriginal Title and Rights.

⁸Independent Power Producers Association of BC (IPPPBC), “Quick IPP Facts List” (undated) online at: http://www.ipppbc.com/quick_facts_list/

⁹IPPPBC, “Is the electricity from IPPs destined for the United States?” *Frequently Asked Questions* (undated) online at: http://www.ipppbc.com/EN/media_room/frequently_asked_questions/

¹⁰BC Ministry of Agriculture and Lands, *Independent Power Production in B.C.: An Inter-Agency Guidebook for Proponents* (September 2008), pg. 12 (“IPP Guidebook”).

¹¹See note 10 at pg. 12; Dr. M. Jaccard, *Assessing BC Electricity Policy: Peer Review of Two Controversial 2007 Documents* (September 1, 2008). Online at: <http://www.ipppbc.com/media/Jaccard%20Peer%20Review%20of%20Liquid%20Gold%20&%20Lost%20in%20Transmission.pdf>

¹²The Hupacasath First Nation on Vancouver Island, through Upnit Power Corp., are the majority owners of small hydro project on China Creek that began operating in 2005.

¹³The Peace Energy Cooperative, with over 300 members, is a partner on the 120 MW Bear Mountain wind park near Dawson Creek.

¹⁴For example, Plutonic Power Corporation Inc., which is developing several large scale hydroelectric projects northeast of Powell River, has partnered with GE Energy Financial Services, a unit of General Electric.

¹⁵Dr. M. Jaccard see note 10 at pgs. 11-12. See also the BC Government’s *Energy for Our Future: A Plan for BC* (November 2002) (“2002 BC Energy Plan”) at pg. 16.

¹⁶2002 Energy Plan. See note 15

¹⁷BC Government, *The BC Energy Plan: A Vision for Clean Energy Leadership* (2007) (“2007 Energy Plan”).

¹⁸See 2002 Energy Plan at note 15 at pg 7. In relation to the Site C Dam, see pg. 30.

¹⁹See 2002 Energy Plan at note 15 at pg 37.

²⁰See 2002 Energy Plan at note 15 at pg 19.

²¹See 2002 Energy Plan at note 15 at pgs. 7 and 37. Despite this policy directive, the Independent Power Producer Association of BC



4. How many IPP projects are there currently in British Columbia?

As of February 2009, there are 46 IPP projects in operation in BC.²² Approximately 70 percent of them are run-of-river/hydroelectric projects.

An additional 38 IPP projects have an “active” electricity purchase agreement (“EPA”) with BC Hydro.²³ According to BC Hydro, most of these projects are expected to reach commercial production by the end of the 2011 fiscal year.²⁴

In addition, BC Hydro issued a new “Clean Power Call” in June 2008. As a result of this Call, BC Hydro received bids for 68 additional projects (from 43 different proponents).²⁵ BC Hydro has not yet awarded EPAs to any of these IPPs.

²²BC Hydro, *BC Hydro Service Plan 2009/10 – 2011/12* at pg. 10.

²³See note 22 at pg. 10.

²⁴See note 22 at pg. 10.

²⁵Simpson, S., “Hydro awash in independent green power bids” *Vancouver Sun* (November 29, 2008).

The call was issued on June 11, 2008. Broken down, the projects are: 45 hydro, 19 wind, 2 waste heat, 1 biogas and 1 biomass.

²⁶See note 22 at pg. 14.

²⁷See note 22 at pg. 14; A. Orlando, “Environment Minister Barry Penner discusses IPP projects after visit to Revelstoke” *Revelstoke Times Review* (February 9, 2009); BC Hydro, 2008 Long Term Acquisition Plan Application: Evidentiary Update (December 22, 2008) at pgs. 10-12.

²⁸See for example the direct Testimony of J. Plunkett to the BC Utilities Commission concerning BC Hydro’s 2008 Long Term Acquisition Plan (November 14 2008). Mr Plunkett was called as a witness on behalf of the BC Sustainable Energy Association and Sierra Club of British Columbia, online at: http://www.bcuc.com/Documents/Proceedings/2008/DOC_20324_C21-4_BCSEA-evidence-pckg.pdf

5. Does British Columbia even **need** more electricity to meet its domestic needs?



According to BC Hydro, BC's demand for electricity will grow by approximately 20 to 35 per cent over the next 20 years.²⁶ This increase is attributed to many factors, including:

- Population growth, and
- Increasing use of electricity intensive technologies such as computers and large screen TVs.

"Fuel switching" in response to rising prices and the desire/requirement to limit greenhouse gas emissions is also seen as a driver in the increasing demand for electricity (such as switching from gas powered vehicles to electric powered vehicles).²⁷

We are not aware of any independent studies that confirm or refute BC Hydro's figures concerning the projected increase in demand for electricity over the next 20 years. We do note, however, that BC Hydro's forecasting figures undergo considerable scrutiny by the BC Utilities Commission ("BCUC") and by other parties who participate in the BCUC hearings. In this context, some commentators/experts have taken the position that BC Hydro can and should be doing more to pursue additional investments in electricity conservation measures (also known as "demand side management" or "DSM" measures).²⁸

6. How does BC hydro intend to meet this forecasted increase in demand?

BC Hydro has developed a three-pronged strategy to meet this forecasted increase in demand for electricity: 1) conserve more; 2) build more; and 3) buy more.

Conserve More

In the 2007 Energy Plan the BC government stated that 50 percent of BC's increase in demand for electricity must be met through electricity conservation or DSM measures by 2020.

In response, BC Hydro is undertaking several conservation measures including the expansion of its Power Smart program and investing in new technologies such as "smart meters", which will allow consumers to track exactly how much electricity they are consuming.

BC Hydro has recently stated that it now intends to meet 75 percent of BC's increase in demand for electricity through conservation and efficiency measures by 2026.²⁹

Build more

BC Hydro is spending over \$3 billion to upgrade/improve its existing "Heritage Assets", which include several large-scale hydroelectric dams.³⁰ BC Hydro is also in the process of evaluating whether the Site C Dam should be built (see *Question #7* below).

Buy more

BC Hydro currently buys electricity from an array of suppliers, including Rio Tinto Alcan, Teck Cominco, several pulp mills, two large hydro projects owned by Columbia Power Corporation, and Alberta and the U.S.³¹ It appears, however, that BC Hydro intends to "buy more", primarily from IPPs.³²

Other Options?

Instead of relying solely on IPPs and improvements to the Heritage Assets for new sources of generation to meet the forecasted increased demand in electricity use, some argue that BC Hydro should pursue other existing sources, such as the "downstream benefits" from the hydroelectric dams covered by the Columbia River Treaty.³³ Currently this electricity is sold to BC's neighbouring jurisdictions, allowing them to be less reliant on "dirty" fuels like coal and natural gas.³⁴ We address the issue of exporting BC's clean/renewable electricity to other jurisdictions in more detail below (see *Question #10*).

As noted above, some commentators/experts are of the view that BC Hydro could also be pursuing additional investments in DSM or electricity conservation measures.³⁵

²⁹BC Hydro, "BC Hydro hammers home conservation message at B.C. Power Summit", *News Release* (March 11, 2009).

³⁰BC Hydro, *Lighting the way for generations: The long-term plan to meet BC's future electricity needs* (undated) online at: http://www.bchydro.com/etc/medialib/internet/documents/planning_regulatory/iep_ltap/lighting_the_way.Par.0001.File.BCH-Lighting+The+Way+for+web.pdf

³¹Davis, S. "Independent power producers generate green energy and jobs in B.C." *Georgia Straight.com* (February 18, 2009).

³²See note 22 at pg. 16.

³³Calvert, J. "Sticker Shock: The impending Cost of BC Hydro's Shift to Private Power Developers" *Policy Brief*, Canadian Centre for Policy Alternatives (April 2007) at pg. 115.

³⁴Hoberg, G. and C. Mallon, "Electricity Trade in British Columbia: Are We a Net Importer or Exporter?" *GreenPolicyProf* blog online at: <http://greenpolicyprof.org/wordpress/>

³⁵See note 28.

7. If the Site C Dam is built, will it fill BC's forecasted increase in demand for electricity?

As noted above, the BC government stated in the 2002 Energy Plan that BC Hydro would not be allowed to build new generation facilities other than large-scale hydroelectric facilities like the Site C Dam.³⁶

In the 2007 BC Energy Plan, the government stated that it, along with BC Hydro, would begin discussions with stakeholders regarding the potential construction by BC Hydro of the Site C Dam.³⁷

The Site C Dam was first examined as a large-scale hydro-electricity option about 25 years ago, and then again from 1989 to 1991. It would be built on the Peace River in northeastern BC, downstream from the existing Williston Reservoir and two existing large BC Hydro dams and generating facilities: the G.M. Shrum and Peace Canyon.

According to BC Hydro, the Site C Dam:

- Would deliver “firm” electricity and capacity that would be highly flexible and that would be available during peak periods of demand;³⁸
- Would optimize upstream storage and regulation, because it is the third project on the river system;
- Has an interim capital cost estimate of between \$5 billion and \$6.6 billion;³⁹
- Would have 900 MW of capacity and generate on average 4,600 gigawatt hours (GWh) annually; and
- Would provide only a portion of the generating capacity needed to bridge BC's forecasted electricity-supply gap.⁴⁰

The Site C Dam would also have significant environmental and social impacts in that it would flood portions of the Peace River valley between Peace Canyon and Fort St John, and portions of the Moberly and Halfway Rivers. Among other detrimental aspects, many families and households would have to be moved from the flood zone and there would be substantial impacts on the rights of West Moberly and other Treaty 8 First Nations.

That said, at least one leading climate change expert—Dr. Andrew Weaver at the University of Victoria—believes that the Site C Dam should be built as it represents a reliable source of clean/renewable electricity going forward.⁴¹

In order to weigh these issues, BC Hydro is embarking on a five-stage evaluation process. Stage 2 of the process is entitled “Consultation and Project Definition” and is currently ongoing. It started with a pre-consultation process to seek from British Columbians who wanted to be consulted about the project and the topics they wished to discuss. Stage 2 alone is expected to take two years.

³⁶See 2002 Energy Plan at note 15 at pg 7.

See note 17 at pg. 4.

³⁷BC Hydro, *Long Term Acquisition Plan Application* (Revision of February 27, 2009) at pg. 3-28. Online at http://www.bchydro.com/etc/medialib/internet/documents/planning_regulatory/iep_itap/2008_itap_application.Par.0001.File.2008_itap_application.pdf.

³⁸In nominal dollars. See BC Hydro, *Peace River Site C Hydro Project: An Option to Help Close B.C.'s Growing Electricity Gap, Site C Feasibility Review: Stage 1 Completion Report* (December 2007) at pg iii.

³⁹See note 39 at pgs 1-3.

8. What does it mean for BC to be “self sufficient” and to have “insurance” electricity?

The 2007 BC Energy Plan states that BC must achieve electricity generation “self-sufficiency” by 2016.⁴² This means that BC must generate enough electricity in the province to meet its demand (once conservation is factored in), instead of relying on imported electricity from neighboring jurisdictions.

The government’s definition of “self-sufficiency” is controversial, as it requires that enough electricity be generated in BC to meet domestic demand in “critical water conditions”; that is, when BC Hydro does its forecasting it must assume the worst case water supply scenarios at the province’s large hydroelectric dams.

The government has further directed that, in addition to being “self-sufficient”, the province produce an additional annual 3,000 GWh of “insurance” electricity by no later than 2026.

The government has stated that these two requirements—“self-sufficiency” and “insurance”—are important to ensure that BC has “energy security”.⁴³ Others see these requirements as veiled attempts to create an electricity export market for IPPs in BC (see *Question #9* below).

⁴²See note 17. Policy Directive #10 in the 2007 Energy Plan. This stipulation was subsequently set out in Section 64.01 of the *Utilities Commission Act*.

⁴³Supra note 10 at pg. 4.

⁴⁴Orlando, A. see note 27;

⁴⁵Conway, D. (BC Hydro), “BC Hydro elaborates on its import-export figures”, Letter to the editor, *Northeast News* (July 16, 2008) at pg. 8.

⁴⁶See note 26.

⁴⁷Marvin Shaffer & Associates Ltd. “Do we really need so much new power?” *Lost in Transmission: A Comprehensive Critique of the BC Energy Plan*, Published by the Canadian Office and Professional Employees Union (June 2007) at pg. 5.

⁴⁸For example:

- The IPPBC, the industry association, has been calling on the provincial government for years to assist the sector in obtaining greater access to the US market on an ongoing basis: See for example the following in their website: (1) “Position Paper on Long Term Firm Electricity Exports” Presented to the British Columbia Energy Council” (November 23, 1992); (2) “B.C. Electricity Market Reform: Policy Recommendations” Submitted to the B.C. Energy Policy Development Task Force (November 1, 2001) at pg. 10.
- The 2002 Energy Plan stated that the establishment of the BC Transmission Corporation would improve access to the transmission system “and enable IPP participation in US wholesale markets”: supra note 9 at pg. 9.
- In January 2007, a large utility in California—Pacific Gas and Electric Company—received permission from the state’s energy regulator to spend up to \$14 million USD to prepare a study to evaluate the feasibility of obtaining wind-generated and other renewable energy electric power from British Columbia: IPPBC, “CPUC approves PG&E studying BC Renewable and transmission” (undated). Further to this point, California has adopted a “Renewable Portfolio Standard” that requires that 20% of its energy be green (according to prescribed criteria) by 2010, with a potential for a 33% target by 2020: See BC Transmission Corporation, 2007 State of the Transmission System Report (December 21, 2007).
- According to the BC Transmission Corporation, “Most western US states now have Renewable Portfolio Standards (RPS) requirements that their load-serving utilities must meet. In general, RPS rules require that a specified percentage of energy delivered to customers in a year come from qualifying renewable sources”: BCTC, Service Plan For Fiscal Years 2009/10 to 2011/12 at pg. 14.



9. Does BC currently import electricity from/ export electricity to other jurisdictions?

Current imports/exports

BC Hydro, through its trading subsidiary Powerex, currently imports electricity from neighboring jurisdictions when it is financially beneficial to do so. In most cases, the electricity BC Hydro imports is from “dirty” sources, such as coal fired generators in Alberta.⁴⁴

BC Hydro also exports electricity generated in BC to neighboring jurisdictions when it is financially beneficial to do so.

BC Hydro has been a net importer of electricity in seven of the last 10 years.⁴⁵ However, electricity trading is complex and **BC Hydro’s** electricity trading figures are not the same as **BC’s** electricity trading figures (which also take into account electricity generated by Teck Cominco and FortisBC, but not BC-Alberta transactions). When one looks at BC’s electricity trading figures, the province has been a net exporter of electricity for seven out of the last 11 years.⁴⁶

Future clean, renewable exports

As noted above, BC is required to be electricity “self sufficient” by 2016 and have an additional 3,000 GWh of annual “insurance” electricity by no later than 2026. Taken together, these two policy stipulations suggest that:

- *Insurance requirements* - in most years, BC will have at least 3,000 GWh of “insurance” electricity that it will not need, and so can export to neighboring jurisdictions; and
- *Self-sufficiency requirements*—in any year where BC is not operating under “critical water conditions” it will have an additional amount of surplus electricity that it can export to neighboring jurisdictions.

At least one energy industry expert—SFU professor Marvin Shaffer—has stated that the “self sufficiency” and “insurance” requirements have effectively created “a policy of acquiring new Independent Power Producer (IPP) resources for export, with BC Hydro and its customers assuming all of the export price risk.”⁴⁷ Further to this point, there is unquestionably a growing demand in North America for BC’s clean/renewable electricity and it is clear that IPP project development in BC is being driven, at least in part, with an eye to the export market, particularly to California.⁴⁸

Thus, the broader question raised by this debate is the following: given that climate change is a global issue, is it BC’s role to assist other jurisdictions, like California, in lowering its GHG emissions by supplying it with clean/renewable electricity and, if so, under what circumstances?



10. Do all IPP projects generate “clean/renewable” electricity?

There is no universally accepted definition of “clean” or “renewable” electricity and different governments, programs and policies define these terms differently.⁴⁹

The BC Government's 2007 Energy Plan does not define these terms but rather states:

clean or renewable resources include sources of energy that are constantly renewed by natural processes, such as water power, solar energy, wind energy, tidal energy, geothermal energy, wood residue energy, and energy from organic municipal waste.

The BC government has developed “Clean or Renewable Electricity Guidelines” that BC Hydro stipulated IPPs meet in order to be eligible to enter into an electricity purchase agreement from the current Call.⁵⁰

The focus of the Guidelines is electricity generation sources that do not produce greenhouse gas emissions (or other forms of air pollution). And while the definition of “clean or renewable” electricity in the Guidelines is somewhat technical, they contemplate a more expansive, and potentially more problematic, list of IPP projects than those listed in the 2007 Energy Plan (above).

For example, the Guidelines:

- Contemplate “hydrocarbon energy” being eligible if, among other things, it produces electricity using a closed loop process whereby all greenhouse gas emissions from the operation of the facility are either deemed to be zero, negligible, or subject to long-term sequestration”;
- Contemplate “municipal solid waste” incineration projects being eligible; and
- Give the Minister of Energy Mines and Petroleum Resources the discretion to recognize or deem “a process, resource or technology” to be Clean or Renewable Electricity so as to be eligible for a supply contract with BC Hydro.

11. What aspects of IPP project development are causing the most concern?

There are several aspects of IPP project development in BC that are causing concern, even to those who are committed to the development of the clean/renewable electricity sector. Among these concerns are the following:

IPP projects are not necessarily “green”

While IPP projects may produce “clean/renewable” electricity from a greenhouse gas/air pollution perspective, they are not necessarily “green” in a way that many people would consider this term to mean. That is, some IPP projects can have a significant industrial footprint and the potential to negatively impact the environment.

For example, some IPP projects require extensive transmission lines, access roads and other infrastructure that impact on the environment, and the wildlife dependent upon it.

Certain types of IPP projects also have the potential to negatively impact fish populations (run-of-river), bird populations (wind) and other sea life (ocean). IPP projects can also disturb visual/esthetic qualities of the landscape and interfere with recreational activities.

An example of a very large IPP project is the Bute Inlet hydroelectric project being proposed by Plutonic Power Corporation Inc. and GE Energy Financial Services in a location 150-200 kms northeast of Powell River. It would have:

- 17 run-of-river hydroelectric facilities constructed in three interconnected groups on tributaries to rivers that run into the inlet;
- A substation and associated access roads and ancillary works;
- Approximately 440 kms of total transmission lines;
- A potential generation capacity of 1027 MW (greater than the Site C Dam); and
- An estimated cost of \$4 billion.⁵¹

Notably, the Bute Inlet project (and the Site C Dam evaluation process noted in *Question #7*) brings to the fore the question of how we should assess the negative impacts of industrial-scale clean/renewable energy development versus the environmental, social and economic threats posed by climate change, and the degree to which such trade-offs can be mitigated or avoided through further conservation and energy efficiency strategies or through improvements to the regulatory framework for IPP projects.

⁴⁹See also the BC Government's IPP Guidebook at note 10, which states at pg. 11 that "The government is inviting independent power producers to develop projects that generate electricity using: Water; Wind; Biomass; Tidal and ocean; Geothermal; Solar; Natural gas, with offsets."

⁵⁰Electricity can be reported and the generation facility eligible for an EPA with BC Hydro if they comply with all applicable federal and provincial environmental regulations and satisfy one of the following requirements:

- It is specifically listed in the Guidelines:
- biogas energy; biomass energy; energy recovery generation; geothermal energy; hydrocarbon energy; hydro energy; hydrogen; municipal solid waste; solar energy; tidal energy; wave energy; wind energy; other potential sources.
- It has been certified by the "Environmental Choice Program" or can demonstrate that it meets the appropriate certification criteria under

this program.

- It otherwise generates electricity recognized by the Minister of Energy Mines and Petroleum Resources to be "Clean or Renewable Energy".

⁵¹Plutonic Hydro Inc., Draft Terms of Reference, submitted to the BC Environmental Assessment Office (January 2009) online at: http://a100.gov.bc.ca/appsdata/epic/documents/p316/1232146402040_b93f9708b-d6c26398a68d7e6dd9fabd5deb-4876290ce955e5e90b9265d257d0f.pdf

⁵²The siting of IPPs has been taken into consideration in some of the more recent Land and Resource Management Plans (LRMP), such as that prepared for the Sea to Sky corridor.

⁵³BC Transmission Corporation, Service Plan For Fiscal Years 2009/10 to 2011/12, at pgs 15-16.

⁵⁴See note 53.

⁵⁵See note 53.

⁵⁶Online at: http://www.bcuc.com/Documents/Proceedings/2009/DOC_21019_12-11_Terms%20of%20Reference.pdf

The provincial government has not done a strategic assessment to determine where IPP projects should, and should not, be located, and development is proceeding before this question is answered

To date, the provincial government has not done a strategic assessment to determine where IPP projects should, and should not, be located across the province so as to minimize their environmental impacts.⁵² Among other things, this has led to:

- Insufficient consideration of the cumulative environmental impacts of IPP projects, and other natural resource extraction projects, in a given geographic area; and
- IPP projects being proposed that would impact on areas that have been previously protected. By way of example, the "Upper Pitt River" water power project proposed by Run of River Power Inc. would have required that the boundaries of the "Class A" Pinecone Burke Provincial Park be adjusted.

It remains to be seen whether recent steps taken by the BC government will be able to meaningfully address at least some of these concerns, namely:

- Participating in the Western Renewable Energy Zone (WREZ) initiative, which is "a regional planning initiative sponsored by the Western Governors Association and the US Department of Energy, and covers 11 western states, the provinces of BC and Alberta, and part of Mexico."⁵³ The purpose of the WREZ process is to, "support the cost-effective and environmentally sensitive development of renewable energy" within the areas of the participating jurisdictions...⁵⁴ As such, it is hoped that the WREZ process will lead to, among other things, the identification of "go" and "no-go" zones for IPP projects taking into consideration environmental values.
- Requiring the BC Utilities Commission—BC's energy regulator—to conduct an inquiry in 2009 that "will determine provincial long-term transmission needs based, in part, on establishing zones of renewable energy potential."⁵⁵ According to the Terms of Reference for the inquiry, which are fairly broad in scope, the panel must invite and consider submissions from the public and a broad array of stakeholders including First Nations, communities, local governments, ratepayer groups and environmental non-governmental organizations.⁵⁶

There are gaps/problems with the environmental assessment process

The Supreme Court of Canada has stated that, “Environmental impact assessment is, in its simplest form, a planning tool that is now generally regarded as an integral component of sound decision-making”.⁵⁷

There are long-standing concerns about gaps/problems with the environmental assessment process for BC projects, some of which are being highlighted by IPP project development. These gaps/problems include:

- The absence of a requirement for strategic or regional environmental assessment (see above).
- Despite having the potential to negatively impact on the environment, not all IPP projects are subject to environmental assessment legislation.⁵⁸
- The environmental assessment process does not adequately incorporate First Nations into the decision-making process, and does not sufficiently recognize Aboriginal Rights and Title, which are protected by the Canadian Constitution.⁵⁹
- The monitoring of, and compliance with, commitments in environmental assessment certificates is not always adequate.⁶⁰

IPP projects may infringe on Aboriginal Rights and Title

As is the case with most natural resource use/extraction activities in BC, IPP projects have the potential to infringe on Aboriginal Title and Rights.

That said, there is no one First Nations’ position on IPPs in BC, and individual nations, organizations and bands are approaching IPP development in different ways.

For example, the Union of BC Indian Chiefs called for a moratorium on run-of-river projects in June 2008, citing the need for consultation.

At the same time, however, some First Nations are very supportive of IPP projects. By way of example, the Hupacasath First Nation on Vancouver Island is the majority owner of a small hydro project on China Creek that began operating in 2005.

Other First Nations are taking a different approach by establishing permitting requirements for IPP projects and/or entering into agreements (partnership agreements, participation agreements, and other benefits agreements) with IPP project proponents.

There are weaknesses in the Water License and Crown Land Tenures regimes

IPPs must obtain a water license under BC’s Water Act if their project involves surface water (such as a run-of-river project) and must also obtain tenure under BC’s Land Act if they seek to locate any part of their project on Crown land (which is the case for most IPPs).

There are several concerns relating to the manner in which these licenses/tenures are awarded, including:

- While the government reviews relevant information from various stakeholders during the adjudication process,⁶¹ there is concern that these reviews do not “necessarily address access, eco-system or wildlife impacts in a consistent way”;⁶²
- There is no lens to eliminate inappropriate sites before applications are accepted; and
- The costs associated with obtaining and/or keeping water licenses/land tenures is too low given the potential profits that can be made by IPPs.

⁵⁷*Friends of the Oldman River Society v. Canada* (Minister of Transport), 1992 Canlii 110 (S.C.C.).

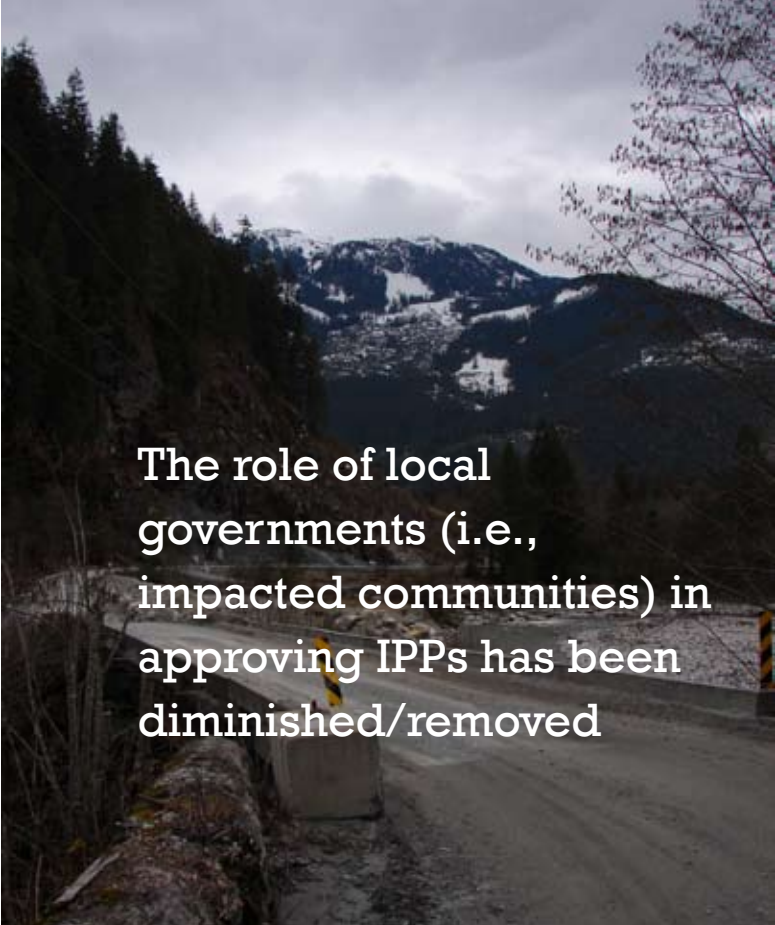
⁵⁸For example, new IPP facilities that produce less than 50 MW of electricity do not trigger the *BC Environmental Assessment Act*; they could, however, still trigger the Canadian Environmental Assessment Act.

⁵⁹Carrier Sekanai Tribal Council, *Critique of the BC Environmental Assessment Process from a First Nations Perspective* (undated) online at: <http://www.cstc.bc.ca/downloads/EA0%20Critique.pdf>

⁶⁰See for example L. Pynn “Miller Creek project failing: report” *Vancouver Sun* (April 28, 2008).

⁶¹See note 10 at pg. 71.

⁶²Douglas, T. “Green” *Hydro Power; Understanding Impacts, Approvals, and Sustainability of Run-of-River Independent Power Projects in British Columbia* (August 2007) at pg 18. Prepared for the Watershed Watch Salmon Society.



The role of local governments (i.e., impacted communities) in approving IPPs has been diminished/removed

In May 2006, the provincial government passed “Bill 30”⁶³, which amended the Utilities Commission Act and clarified that local governments do not have decision-making powers with respect to IPP projects on Crown land in most cases.⁶⁴

The context for this decision by the provincial government was the controversy around IPP development in the “Sea to Sky” corridor between Vancouver and Lillooet on BC’s south coast. Specifically, by the early 2000s, over 50 run-of-river sites had been identified in the corridor.⁶⁵

One of the sites in question was on the Ashlu River and was being proposed by a company called Ledcor. However, the Squamish Lillooet Regional District (“SLRD”) Council voted, in January 2005, against approving the Ledcor project.⁶⁶ A subsequent re-zoning application brought by Ledcor was, in January 2006, put on hold by the SLRD Council for six months so that it could further assess the issue.⁶⁷ Shortly thereafter, Bill 30 was passed.

Provincial regulatory agencies and ministries do, however, still have a policy of consulting with local governments in relation to IPP projects proposed in their communities.

IPP projects are being developed by the private sector, not BC Hydro

As noted above, the 2002 Energy Plan stated that the private sector will develop IPP projects, not BC Hydro. This is one of the most controversial aspects of IPP project development in BC.

Supporters of this policy argue, among other things, that:

- IPPs can develop and build new projects at a lower cost than BC Hydro;⁶⁸
- The private sector is better suited to bear the high financial risks associated with building new generation sources;⁶⁹
- While the percentage of private ownership of BC’s electricity generation sources will increase, this will not lead to a privatization of the “system” as both BC Hydro and BC Transmission Corporation are still publicly owned;⁷⁰
- Virtually all jurisdictions throughout the world—including some with left of centre governments—are increasing the role of private, independent producers in electricity generators;⁷¹ and
- BC Hydro’s expertise is in large hydro-electric dam projects, not IPP projects.

Detractors of this policy argue, among other things, that:

- The profits that BC Hydro has traditionally earned from selling electricity, and contributed to the provincial treasury, will now be accruing to private sector companies;
- Private ownership electricity does not allow for the same degree of accountability and transparency as public ownership;⁷²
- Due to the high rates that BC Hydro is paying IPPs for the electricity they produce, electricity bills will dramatically escalate;⁷³ and
- Once the initial contracts with BC Hydro expire, IPPs could be free to export their electricity if they can get a better deal in the US, thus undermining BC’s energy security.⁷⁴

⁶³The *Miscellaneous Amendment Act* (No. 2), 2006.

⁶⁴Section 56 of Bill 30 amended Section 121 of the *Utilities Commission Act*. See Minister Richard Neufeld’s speech to the IPPBC AGM (June 7, 2006); Minister Neufeld, Debates of the Legislative Assembly (May 15, 2006 Afternoon Sitting) online at <http://www.leg.bc.ca/hansard/38th2nd/H6051Sp.htm#bill30-3R>

⁶⁵Squamish-Lillooet Regional District, *IPP Development in the Squamish-Lillooet Regional District* (April 28, 2003) at pg. 7.

⁶⁶Calvert, J. *Liquid Gold: Energy Privatization in British Columbia* (Fernwood Publishing 2007) at pg 175.

⁶⁷See note 68 at pg. 177

⁶⁸IPPBC, “Why doesn’t BC Hydro build run of river projects instead of IPPs?” *Frequently Asked Questions* (undated) online at: http://www.ippbc.com/EN/media_room/frequently_asked_questions/

⁶⁹M. Jaccard see note 11 at pg. 11.

⁷⁰See note 69 at pg. 9.

⁷¹See note 69 at pg. 11.

⁷²Western Canada Wilderness Committee, “Power Grab” (Winter/Spring 2008) Vol. 27 no.2.

⁷³See note 33 at pg 114.

⁷⁴See note 33 at pg. 115.

12. What work is West Coast Environmental Law doing on IPP projects?

In combination with the other actions that are being taken in BC to combat climate change (such as energy conservation and efficiency efforts), West Coast Environmental Law supports in principle the efficient development of clean/renewable electricity projects in BC on a scale that is large enough to match their potential in contributing to global warming solutions.

However, we believe these projects must be developed in a manner that minimizes the impact on the environment and ensures benefits flow to local communities.

West Coast has a long history of providing sound legal research and analysis to inform strong environmental laws and policies in BC. To that end, we are assessing ways in which the regulatory framework for IPPs can be improved to address the many issues of concern.



The information provided in this background is intended for public education purposes only and does not constitute legal advice. If you have specific legal questions please contact one of West Coast's lawyers.

Funding for this project has been generously provided by the Law Foundation of BC and the North Growth Foundation.

Published May 2009

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