

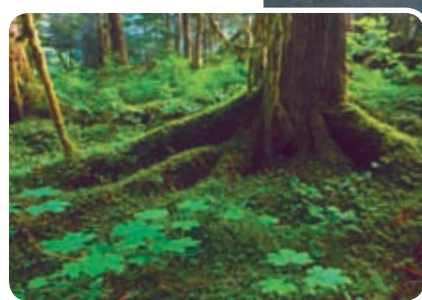
In an era of climate change and rapidly disappearing fossil fuels, clean renewable energy is literally worth its weight in gold. In North America, the vast majority of the energy we use comes from fossil fuels, including coal and oil. These dirty fuels produce carbon dioxide and other heat-trapping greenhouse gasses which are changing the earth's climate rapidly.

In British Columbia we have an enormous geographic advantage when it comes to the production of clean green energy. Our mountainous terrain, high rainfall and numerous creeks and rivers create ideal conditions to produce hydroelectricity. By handing over control of this valuable resource to private corporations we are not only giving away an invaluable public asset, we are severely constraining the ability of the provincial government to achieve important conservation objectives and energy self-sufficiency. Unlike BC Hydro, which is mandated to serve the public good, private power corporations have little incentive to promote conservation because doing so erodes their bottom line.

The government's mad rush to develop private hydropower has resulted in a chaotic situation where cumulative environment impacts are ignored, regional planning is nonexistent, long-term energy security needs are undermined and local governments have been silenced. Instead of public ownership of hydroelectricity which serves the public interest, provides accountability and transparency, and returns hundreds of millions of dollars annually to provincial coffers, the provincial government has rolled the dice and decided to gamble, selling out the future of British Columbia's streams and rivers.



TOP: Similkameen River. Photo: Gwen Barlee.
LEFT: Upper Elk Creek. Photo: Anton Van Walraven.



Provincial environmental laws offer little protection

BC has no stand-alone endangered species legislation to safeguard wildlife impacted by private power projects, and the BC Environmental Assessment Process is little more than a paper tiger.⁵ In the 10 years the Environmental Assessment Office has been in operation it has never rejected a development, and the BC Environmental Assessment Act was weakened even further in 2002 when it was rewritten by the provincial government.⁶ An assessment is only applied if a project is large — over 50 Megawatts (MW) — which has encouraged some private hydro projects to escape even this minimal scrutiny by building 49 MW projects.⁷ Astoundingly, the BC government evaluates each of these projects in isolation. In doing so, the government fails to address the cumulative impacts of multiple projects in a concentrated geographic area, and the roads, logging, transmission lines, dams, river diversions, tunnel rock and slurry, powerhouses and maintenance, which accompany them. For instance, each of the 60 proposed projects in the Sea-to-Sky corridor would be evaluated as a "one-off".

Public accountability and the democratic process

In 2005 when the Squamish Lillooet Regional District refused to sign off on a contentious private hydro project being built on the Ashlu River the BC government introduced Bill 30. The controversial legislation took away the zoning rights of all local governments to decide whether such projects should proceed — removing the only tool regional governments had to control the proliferation of private power projects.

Due to weak BC environmental laws, mountain goats, and other wildlife have little protections when it comes to the development of private hydro projects. Purcell Mountain Range. Photo: Gary Diers.



Take Action

In an era of climate change, public ownership and control of BC's streams and rivers is essential to providing energy security, proper environmental oversight and accountability, and the sustainable development of renewable sources of energy.

Clean green energy is the way of the future, but it must be done correctly — benefiting the citizens of British Columbia and with minimal impact on the environment. Some ecologically destructive private hydro power projects, such as the Upper Pitt and Glacier/Howser, must be stopped before they are even started.

If you are concerned about the give-away of BC's streams and rivers—our birthright and our legacy to future generations—to private for-profit power producers please let Premier Gordon Campbell know how you feel.

Become Involved

There are thousands of people like you who are concerned about the privatization of BC's streams and rivers. Contact the Wilderness Committee, or send us your email, and we will keep you up-to-date about information, events and actions concerning private power projects. Your email is secure with us as we never trade or sell personal information.

info@wildernesscommittee.org • 604-683-8220 • www.wildernesscommittee.org

YES! I'll stand up for BC's Rivers!

Here's my tax-deductible donation.

Enclosed is: \$25 \$50 \$100 Other \$ _____
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I want to become a member! Enclosed is my annual fee for a:

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WILDERNESS COMMITTEE
Please return with your gift to:
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V6B 2K7



BC groups working on this issue

- BC Citizens for Public Power
www.citizensforpublicpower.ca
- BC Creek Protection Society
www.bc-creeks.org
- Canoe Kayak BC
www.canoe kayakbc.ca/index.php
- COPE 378 – Take Back the Power Campaign
www.publicpowerbc.ca
- Burke Mountain Naturalists
www.bmn.bc.ca
- Private Power Watch
www.privatepowerwatch.com
- Outdoor Recreation Council of BC
www.orcbc.ca
- RainCoast Conservation Foundation
http://raincoast.org
- Save Our Rivers Society
www.ourrivers.ca
- T. Buck Suzuki Foundation
http://bucksuzuki.org
- Watershed Watch Salmon Society
www.watershed-watch.org
- West Kootenay Ecosociety
http://eco.kics.bc.ca/campaigns.html
- Wilderness Committee
www.wildernesscommittee.org
- White Water Kayaking Association of BC
www.whitewater.org

REFERENCES

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- Independent Power Producers Association of BC. Map – IPP Projects in BC. http://www.ipabc.com/media/IPP%20Map_2007_05_16_Sec.pdf
- Mean Annual Discharge: The discharge, if continued uniformly, would result in the same volume as that actually observed for one year. It is important to note that 80 – 90 % of the mean annual discharge (MAD) does not include the minimal amount required to meet fish flows.
- The BC Conservation Service undertook an investigation into the incident at Miller Creek. As of Jan 21, 2008, the time this paper went to press, the investigation had not yet been completed.
- BC's lack of safeguards for terrestrial species was reported on in a Tyee article, "BC's Hinterlands are Opened Up for Business", (http://theyee.ca/News/2007/10/17/RiverPower/) in which Ross Neuman, head of the ecosystems section of the Ministry of Environment's environmental stewardship division said, "We have guidelines that we wish proponents to follow when they do an assessment of potential impacts to fisheries, but we don't have any guidelines at this time for proponents when assessing impacts to wildlife or any other non-fish species."
- West Coast Environmental Law. Deregulation Background – Bill 38 the New Environmental Assessment Act. http://www.wcel.org/deregulation/bill38.pdf
- A megawatt (MW) produces roughly enough energy to power 500 homes.
- British Columbia. BC Hydro. BC Hydro's Annual Report 2007. http://www.bchydro.com/rx_files/info/info52808.pdf
- Simpson, Scott. "Power line upgrades to cost B.C. consumers" Vancouver Sun, January 10, 2008, A1
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CREDITS

Research & Writing: Gwen Barlee
Editing: Matthew Sasaki and Andrew Radzik
Mapping: Geoff Senichenko **Design:** Gil Aguilar
Photos: WC files except where noted.
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POWER GRAB

BC's rivers and streams at risk



Transmission lines accompany the development of all private hydro projects. Photo: Gary Diers.



River-diversion tunnel at the Ashlu Private Power Project.



BC is famous for its wild rivers and streams.



"Run-of-river" projects should actually be called "river-diversion" projects as up to 80 to 90 percent of the river is diverted through large pipes in order to generate electricity. Purcell Mountain Range. Photo: Gary Diers.

A river runs through it

British Columbia's creeks and rivers are literally the stuff of life, providing us with multiple benefits including fresh water, drainage, irrigation, recreation and hydroelectricity.

Our rivers are also an ecological lifeline, acting as a home to thousands of aquatic species including coho, Chinook, pink, sockeye and spring salmon as well as providing essential habitat to a vast array of terrestrial species ranging from grizzly bears to tiger salamanders.

Unfortunately BC's rivers are at risk.

In 2002, the provincial government stopped BC Hydro, our crown corporation, from developing new sources of clean green energy. The government arbitrarily decreed that any new production of wind energy, biofuel or hydroelectricity would have to come from the private sector.

At first blush this may not have appeared to be a bad idea, but upon closer examination this policy is fraught with problems.

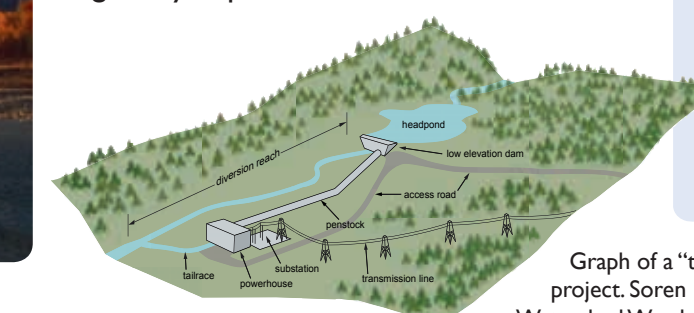


BC rivers are an ecological lifeline for thousands of species. Similkameen River. Photo: Gwen Barlee.

The BC government's 2002 Energy Plan announcement led to a gold rush mentality which saw over 500 creeks and rivers "staked" by so-called "Independent Power Producers" (or IPPs), which are in fact private power developers. This gold rush was fueled not only by the Energy Plan but by water-for-power licenses that were given away at fire-sale prices.¹

Currently, there are 35 private hydro projects in operation in British Columbia, and an additional 45 proposals have obtained contracts, called Energy Purchase Agreements, with BC Hydro.²

When most people think of a "run-of-river" power project they visualize a free-flowing river with a small turbine generating electricity. The reality is far different. Typically, up to 80-90 percent of the mean annual discharge of a river is diverted into a pipe, known as a penstock, which channels water downhill for several kilometers to a turbine where electricity is generated and the water returned to the ecosystem.³ However, between the intake and output process there will be far less water flow in the river. Natural seasonal fluctuations in river flow will be blunted and there will be fewer aquatic insects, and less gravel and woody debris, all of which negatively impact stream health.



Miller Creek's water flow on a normal day (September, 2007)...

What could go wrong?

Once built, Private Power Projects are almost fully automated, leaving rivers with projects vulnerable to malfunctions. One such malfunction happened recently at Miller Creek near Pemberton, BC. On September 8, 2007 an accident at the plant resulted in a critical low-water incident, in which water was prevented from flowing into the creek for several hours. Alarms that were supposed to alert officials didn't work correctly and the Creek, which has important populations of bull trout, whitefish and salmon, was reduced to just inches of water.⁴



...and Miller Creek during the critical low-water incident (September 8, 2007).

Graph of a "typical" run-of-river hydro project. Soren Henrich drawing. Courtesy Watershed Watch Salmon Society.

Energy security and financial concerns

In paying for privately produced hydroelectricity, acquired through contracts called Energy Purchase Agreements (EPAs), ratepayers (i.e. the public) pay for the capital costs of the projects, but when the 20-40 year contracts expire the public won't own any assets. And far from providing energy security for BC, after the contracts run out the electricity will be sold to the highest bidder, with the public having no guarantee that the power produced won't be exported to run air conditioners in California.

The high cost of privately produced hydropower is also of concern. BC Hydro contracts with private producers have committed ratepayers to prices almost double current market rates. In just five years BC Hydro has committed to Energy Purchase contracts totalling over \$20 billion.⁸ Just recently the Vancouver Sun revealed the public will be on the hook for an additional \$600 million to provide transmission links for private power projects.⁹

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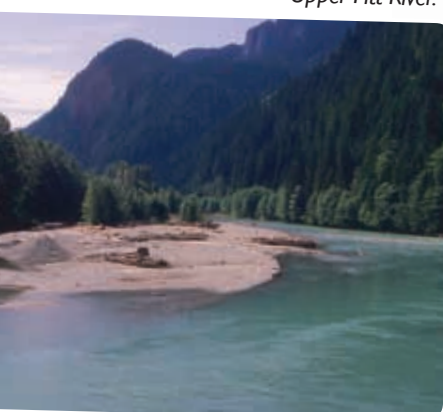


Purcell Mountain Range. Photo: Gary Diers.

Upper Pitt River Pinecone Burke

Located just 40 kilometers northeast of Vancouver the upper Pitt River Valley is a spectacular watershed found in the heart of the Katzie First Nations traditional territory. Boasting wolverines, grizzlies, marbled murrelets, wolves, mountain goats and elk within the Valley, this scenic area also hosts a tremendous diversity of fish including cutthroat trout, Dolley Varden, bull trout, steelhead and all five species of Pacific salmon. It supports the largest population of wild coho remaining in the entire lower Fraser River.

One of BC's most endangered rivers, the Upper Pitt River Valley is under threat from the proposed development of a large hydro project. The proponent, Northwest Cascade Power, Inc. intends to divert water from every major tributary of the Upper Pitt River. Four of the eight creek diversions would result in direct loss of habitat for ocean-migrating wild salmon. Boise Creek, one of the creeks to be diverted, is home to a unique Dolley Varden-bull trout hybrid found nowhere else in the world. Accompanying the powerhouses would be blasting, road building, dam construction and kilometers of transmission lines and pipelines. One of the most disturbing aspects of this proposal is the plan to construct a precedent-setting transmission line in Pinecone Burke, a Class A Provincial Park, to the west of the Pitt River Valley. The proposed transmission line would be built in one of only two areas identified in the Valley as grizzly bear habitat. It would also disturb sensitive wetlands and could interfere with the movement of large mammals that live in the protected wilderness in neighbouring Garibaldi Park and southern protected areas



Upper Pitt River.



Box Canyon on the Ashlu. Photo: Todd Gillman.

Ashlu Creek

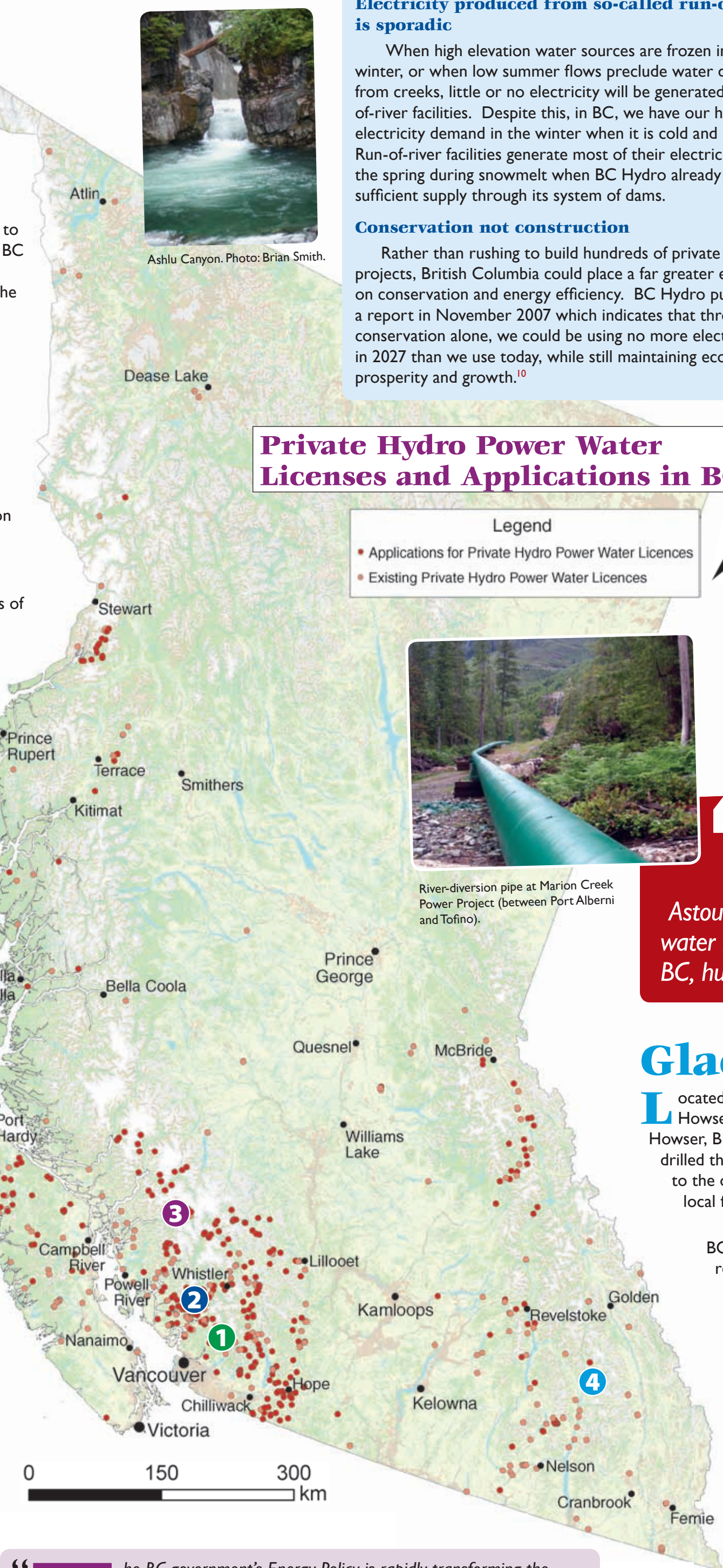
In the mountainous Sea-to-Sky region of British Columbia, seven new private hydropower projects are already in operation. Astoundingly, with no regional planning or public oversight there are proposals for an additional 60 private power projects between Lions Bay and Pemberton.

One of the most contentious projects is the large Ledcor development on Ashlu Creek. The Ashlu is renowned for its tremendous scenic and recreational values including world-class kayaking opportunities in its unique "box canyon". Home to a threatened population of grizzly bears, there are also bald eagles, black bears, jays and owls populating the watershed. In the Ashlu's lower reaches salmon spawn in the cool clear water.

Due to its important ecological and recreational values, in 2004 a provincially sanctioned Land Use Plan, the Sea-to-Sky Land Management Plan, recommended the Ashlu be off limits to private power production. Similarly, in 2005 the Squamish Lillooet Regional District (SLRD) voted against the Ashlu project, based on the results of three public hearings and four open houses. Surprisingly, in response to the Regional District's refusal to allow a power project on the Ashlu the BC government arbitrarily introduced "Bill 30". The Bill not only over-rode the SLRD, it removed the zoning ability of all local governments Province-wide to stop private power projects.

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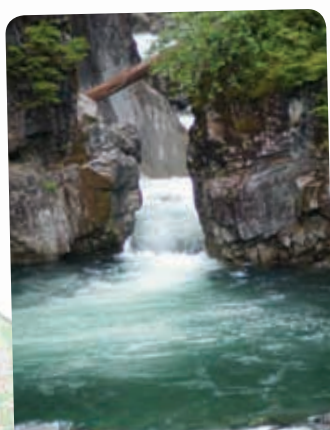


Private Hydro Power Water Licenses and Applications in BC

- Legend
- Applications for Private Hydro Power Water Licences
 - Existing Private Hydro Power Water Licences



River-diversion pipe at Marion Creek Power Project (between Port Alberni and Tofino).



Ashlu Canyon. Photo: Brian Smith.

Electricity produced from so-called run-of-river is sporadic

When high elevation water sources are frozen in the winter, or when low summer flows preclude water diversion from creeks, little or no electricity will be generated by run-of-river facilities. Despite this, in BC, we have our highest electricity demand in the winter when it is cold and dark. Run-of-river facilities generate most of their electricity in the spring during snowmelt when BC Hydro already has a sufficient supply through its system of dams.

Conservation not construction

Rather than rushing to build hundreds of private hydro projects, British Columbia could place a far greater emphasis on conservation and energy efficiency. BC Hydro published a report in November 2007 which indicates that through conservation alone, we could be using no more electricity in 2027 than we use today, while still maintaining economic prosperity and growth.¹⁰

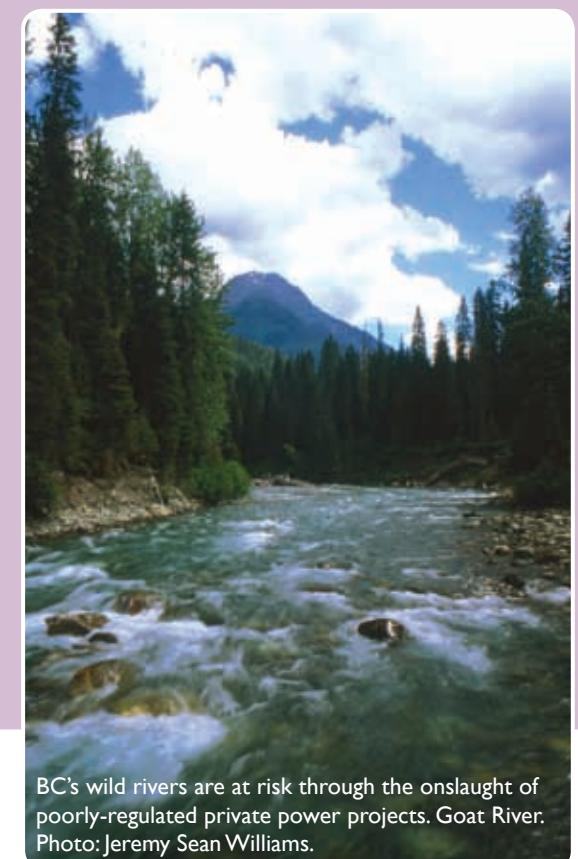
East Toba/Montrose

3 Located north of Powell River, the proposed \$550 million East Toba and Montrose Creek power projects are just the first of 31 private sector projects, coined the "green power corridor," proposed for this remote area. The Montrose and East Toba are large projects with a combined capacity of 196 megawatts, making them the two largest private hydro facilities in BC.

Due to their remote location on the Sunshine Coast, the two projects, which have enough capacity to light 75,000 homes, will require over 60 kilometers of access roads, 11 bridges and a 145 kilometer transmission line. Accompanying this transportation grid is a 200-man construction camp and airstrip. Construction has already begun on Montrose and East Toba and environmental assessments are currently being finalized for three further projects in the Upper Toba Valley.

Plutonic Power Corp is the corporation behind this ambitious project. The company which, 18 months ago had "no track record in the electricity-generation business," recently secured a \$100 million partnership with General Electric with arrangements for a "further \$450 million infusion from a syndicate of insurance companies," making it a very powerful player in the private power business in BC.¹¹

Plutonic has also been strategic with appointments to its senior management team. Over the past two years it has hired key employees from BC Hydro and the Provincial government and secured individuals well connected to the BC Liberals, including Premier Campbell's former Deputy Chief of Staff for policy



BC's wild rivers are at risk through the onslaught of poorly-regulated private power projects. Goat River. Photo: Jeremy Sean Williams.

465

Since 2001, over 60 water licenses have been granted for private hydropower projects in British Columbia. Astoundingly, there are 433 additional applications pending — impacting 465 water bodies. From the Kettle River in Grand Forks to Galore Creek in northern BC, hundreds of creeks and rivers are falling into private hands.

Kootenays Glacier/Howser

4 Located just north of Kaslo in the heart of the Kootenays, the proposed 125 MW Glacier/Howser hydro project would divert up to 80 percent of the mean annual flow from Glacier, Howser, Birnam, Behrman and Suck Creeks into 16 kilometers of tunnels and pipes that will be drilled through adjacent mountains. Unlike most other projects, rather than returning the water downstream to the original creek beds, it would be diverted directly into the Duncan Reservoir. Biologists are concerned local fish populations, including endangered bull trout, and vital riparian areas will be negatively affected.

Surprisingly, Axor, the project's proponent, has already secured an Energy Purchase Agreement from BC Hydro despite the fact that the proposal has yet to undergo a federal or provincial environmental review process.

To connect the power generated to the BC transmission grid Axor is proposing to construct 91.5 kilometers of new transmission lines, which would be built across the Purcell Mountain range from the West to the East Kootenays. The proposed transmission line, ranging in a cleared right-of-way from 25-100 meters, will bisect numerous protected forest reserves, old growth forests and other areas of pristine wilderness. The Purcell Mountains are renowned for their rich wildlife including wolves, mountain goats, wolverines and threatened populations of mountain caribou and grizzly bears. Additionally, there are serious concerns that roads required during the construction phase for the transmission line will increase threats to wildlife by giving ATV access to previously pristine areas.



"The BC government's Energy Policy is rapidly transforming the province's electricity system from one owned and controlled by the people of the province to one that is operated in the interests of private energy developers and multinational energy corporations." Professor John Calvert, Simon Fraser University — Author of Sticker Shock