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## U.S. utility keen on B.C. power

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In a matter of days, a California energy utility will announce the results of a \$14-million US study of B.C.'s vast green electricity potential — and opportunities to bring that power to the American market.

California wants to be the biggest consumer of green power on the western North American transmission grid, and documents show that B.C. Transmission Corp. and BC Hydro are working in support of that ambition.

The initiative, entirely separate from BCTC's \$5.1-billion project to upgrade British Columbia's aging transmission system, has a projected value of \$17 billion — not counting the benefits that would flow to B.C. from heightened electricity trade with utilities in the United States.

BCTC estimates that private-sector investment of \$13 billion for development of wind, small hydro and bioenergy resource projects could boost electricity production in the province about 40 per cent above BC Hydro's present annual output by 2015.

The installed, or theoretical, capacity of all that development is more than twice the output of the largest hydroelectricity facility in the province, the Bennett Dam/Shrum Generating Station on the Peace River in northeastern B.C. — although both wind and small hydro are intermittent energy sources that depend on the variable nature of stream flow and wind.

The power would travel from B.C. to central California on a proposed \$4-billion transmission line running south from Selkirk substation in southeastern B.C., through Washington and Oregon to central California.

B.C. already sells power into the U.S. on this route, and since Selkirk substation is only a few kilometres from the U.S. border, its contribution to the new transmission line is nominal.

B.C.'s green energy resources, however, are central to the project.

Pacific Gas and Electric, which serves 15 million customers in north and central California, is leading the effort and is poised to release a \$14-million study of B.C.'s potential to feed the state's appetite for green power.

According to Fong Wan, PG&E's vice-president of energy procurement, the shareholder-owned utility has already locked up enough new power development to meet a state-mandated goal of 20-per-cent renewable energy in its portfolio by 2010.

However, Wan noted that legislation developed by the state assembly aimed at curtailing greenhouse gas emissions will push that standard higher. And that's why the utility is looking at B.C.

It will present its findings to the California Public Utilities Commission (CPUC), which regulates utilities in the state in much the same manner that the B.C. Utilities Commission regulates BC Hydro and BCTC.

"We've always been told that B.C. has a vast amount of potential renewable energy," Wan said in a telephone interview earlier this week. "So our desire to explore this possibility is to see what's really there, and how it compares to what else is available in the marketplace."

Early studies have suggested that B.C. power would be affordable for PG&E customers under a variety of economic scenarios.

Wan did not want to discuss the conclusions of the study until it is released.

"We are going to be filing our report with the CPUC in a matter of a week or less. I'm not comfortable with disclosing [its findings] prior to that.

"But I can let you know that I expect in general our comments to be very positive."

Electricity trade has been a boon to British Columbia since then-premier W.A.C. Bennett beat Prime Minister Lester Pearson and U.S.

President Lyndon Johnson at the negotiating table for the Columbia River treaty in 1964, and opened the floodgates on a stream of power sales revenue that continues to this day.

The flow of cash was enhanced 20 years ago with the creation of Powerex as a power-trading subsidiary of BC Hydro to market surplus power from hydroelectric facilities across the province.

The trading concept is simple in both theory and execution: Open the dams and export B.C. power when electricity prices south of the border are high, and close the dams and import power when U.S. prices are low.

This arrangement usually works to B.C.'s benefit, but that advantage is eroding due to a lack of major new generation development since the Revelstoke Dam was completed more than two decades ago.

This has prompted the provincial government to order BC Hydro to bring the province back to a net export position through the development of new renewable electricity resources by independent power producers.

Carbon dioxide emission-free power is attractive to traders south of the border as governments move to curtail greenhouse gas emissions that are causing climate change.

Trade can't grow without an improved transmission system. The western grid was never set up to serve a far-flung group of power-trading utilities, and it is frequently running at the limit of its reliability.

Pacific Gas and Electric, BC Transmission Corp. and other utilities along the grid are working on a project to fix it — the Canada/Pacific Northwest to Northern California Transmission Project, a \$4-billion initiative that will complete the first phase of planning in August.

If it goes ahead, it will be the first major expansion of the system in a generation.

"I think the transmission can be built because we built similar infrastructure several decades ago, but it is by no means an easy process," PG&E's Wan said.

B.C. green power resources are one of the keys.

"California and British Columbia have had a long-standing seasonal trading relationship, and that's because down in California we are summer-peaking [in electricity consumption] and you in B.C. are winter-peaking," Wan said.

"We have been able through decades of trading to share our resources on a seasonal basis, and that has gone quite well, in general. From that perspective, we are trading parties ... we share resources."

Doug Little, vice-president of customer service and strategy development at BCTC, said discussions are at "at a very preliminary stage," and while the project looks "promising" from B.C.'s side, "it's too early to say whether it will go ahead or not."

"We can say we have taken a preliminary look at the overall economic feasibility of the line, and concluded it makes sense to go on to the next step and start doing some engineering studies and so on."

There is also an elaborate system of checks and balances to determine whether it's a good deal for B.C.

Little said the project would need approval from both the B.C. Utilities Commission and the National Energy Board before it could go ahead. There would be similar scrutiny in the U.S., he added.

This is not the only project aimed at taking B.C. resources south.

Sea Breeze Power Corp., a Vancouver-based company trading in the 40-cent-a-share range on the TSX Venture Exchange, already has authorization from Canada's National Energy Board and the U.S. Department of Energy to run an undersea cable from the southern tip of Vancouver Island to Port Angeles, Wash., via the Strait of Juan de Fuca.

This link, notes Sea Breeze president Paul Manson, would give power another route to flow between B.C. and the U.S. grid, enhancing the reliability to Vancouver Island's power supply, as well as providing an additional framework — and an extra market — for wind power projects on the island.

"There are just vast renewables in the northwest, right up into Alaska. The first of these great renewables is wind. What we need to realize this potential is additional transmission," Manson said in an interview.

The ballpark cost of the full project is about \$450 million, and Manson said Sea Breeze is unlikely to attract investment until it has a full roster of engineering studies and other background work to accompany the federal permits.

Nonetheless, the notion of a privately owned transmission line facilitating the delivery of electricity into the U.S. market, without the comfort of public ownership, is drawing critics.

So is the Selkirk-to-California project.

"It's no secret that the U.S. — particularly western states such as California — is desperate for additional sources of energy," said Melissa Davis, executive director of B.C. Citizens for Public Power. "And it's no secret that B.C. possesses the natural resources to generate this additional power. But at what cost?"

"Hydro power is 'green' only insofar as it generates no greenhouse gas emissions. But there are numerous additional environmental impacts to consider if new projects are required in order to supply power to the U.S. — logging, road construction, flooding, and threats to numerous aquatic species and wildlife."

Analyst John Calvert — whose recent book, *Liquid Gold*, asserts that B.C. is "rapidly losing public control of our electricity system" — concurred.

"There is a significant environmental impact from these wind farms, and the worst-case scenario is that we get the environmental damage while utility firms in California plus the investors who own these facilities get all the benefits.

"The question is, what's in it for the people of B.C.?"

B.C. Energy Minister Richard Neufeld said the benefits of the Selkirk line are mutual, not exclusive to the United States.

"We are dependent on the U.S. for a big part of our electricity today, and have been for seven of the last 10 years. If it hadn't been for that transmission line, our lights wouldn't be on. We actually need electricity from them to keep going," Neufeld said.

"We need to actually keep increasing the capacity of those transmission lines to meet our own needs. That's what we have to do first. But in the meantime we should be looking at opportunities to actually have green power and export it to the U.S., and make money at it. I don't think there's anything wrong with that."

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