



Pacific Institute  
for Climate Solutions  
Knowledge. Insight. Action.

## Briefing Note 2010 – 8

9 June 2010

### Provincial Competition for Clean Technology Investment

Produced in partnership with [ISIS | A Research Centre | Sauder School of Business | UBC](#)  
Authors: Calyn Shaw, MA and James Tansey, PhD, ISIS, Sauder School of Business, UBC  
Editors: [Dr. Alison Shaw](#), [Dr. James Tansey](#), [Ivan Watson](#)

#### Issue

Recently both Quebec and Ontario signed clean-tech development deals with major international companies: Mitsubishi and Samsung respectively. It has been suggested that BC is missing out on similar opportunities. However, in both cases these investments went to Ontario and Quebec because of incentives that are inconsistent with British Columbia's core economic development policy. Ontario's \$7 billion deal with Samsung is especially inconsistent with BC's clean-tech development strategy.

This note assesses competition between provinces to attract clean technology investment. The BC approach is simple and incremental: no large financial incentives or handouts, targeted funding, low taxes, and strong support for demonstration projects. However, for positive growth in clean energy to continue in BC, the province may wish to consider a few additions that maintain a competitive edge: (1) replace incentives that will be lost when the province adopts the HST; (2) consider a small feed-in tariff; and (3) expand the current incentive program to build on the most successful incentives.

#### Background

On January 20, 2010 Ontario signed a deal with Samsung that will see the investment of \$7 billion in wind and solar energy projects in the province, the largest renewable energy project of its kind in the world.<sup>i</sup> The Ontario government will pay \$437-million in incentives if Samsung completes its commitment to build four plants in the province to manufacture wind-turbine towers and blades, and solar inverters and modules. The entire project will have a combined power-generating capacity of 2.5 GW by 2016, around four per cent of Ontario's total electricity demand.<sup>ii</sup>

On January 13, 2010, Hydro-Québec, Mitsubishi Canada and the city of Boucherville announced that they would launch a pilot project in late 2010 with the goal of testing 20 electric Mitsubishi vehicles (i MiEV) in harsh winter conditions. The project is expected to cost \$4.5 million and will include the participation of local businesses, which will receive many of the vehicles.<sup>iii</sup> It represents the first initiative of its kind to

include the participation of a car manufacturer, a public utility, a municipality and local businesses, and will allow Boucherville to understand better how its electrical distribution network will handle extra demand imposed by electrification of the vehicle fleet.<sup>iv</sup>

Samsung said it was lured to Ontario because the province's new Green Energy Act and feed-in-tariff (FIT)<sup>\*</sup> program was unique in North America.<sup>v</sup> Samsung will receive around 4% more for the solar and wind power it produces than other participants in Ontario's generous FIT program. Ontario's Green Energy Act pays producers of wind and solar power four to fifteen times the market rate for electricity, respectively. The government calls this extra incentive an "economic adder," which is used as a flexible negotiating tool, not unlike tax breaks used to lure foreign investment.

Ontario's approach, particularly the Samsung deal, has attracted criticism. Critics point out that for every job created at a Samsung site, the taxpayer is on the hook for \$303,000. The government is also under fire for partnering with a state-owned energy company from Korea when government-owned Ontario Power Generation is considered capable of taking on similar projects.

Some analysts in BC have praised Ontario for adopting this approach, while some have used Ontario's initiative to criticize BC for adopting a different approach to power generation, which they claim subsidizes the private sector to exploit BC's green energy resources.<sup>vi</sup> However, Ontario's approach is more heavily subsidy driven. As a result of BC Hydro's competitive bid process, ratepayers pay the market price for new green electricity. In BC Hydro's last Clean Power Call, the average contract came in at 8.5 cents kWh.<sup>vii</sup>

The BC approach to attracting clean-tech investment is based on three pillars:

- No large financial incentives or handouts
- Targeted funding
- Low taxes

BC's approach has begun to attract investment, without the province having to contribute significant subsidies. For example, BC's partnership with General Electric (GE) is critical to the growth and expansion of BC's clean-tech sector. GE Canada partnered with UBC and Vancouver's Nexterra Energy to develop and demonstrate a new renewable electricity generating system using Nexterra's biomass technology and a GE Jenbacher engine. GE's Energy Financial Services division has invested \$500 million in Plutonic Power's Toba Inlet run-of-river hydro project and has joined Plutonic in a \$227-million investment in the first phase of the Dokie wind farm project.<sup>viii</sup>

## **Options and Recommendations**

Many of the clean-tech incentives in Ontario, Quebec and BC are consistent. Each province offers income tax incentives (until the shift to HST, both BC and Ontario also had a number of sales tax incentives), as well as other incentives aimed at building energy efficiency programs or attracting clean-tech manufacturing

---

\* A feed-in tariff is a policy mechanism designed to encourage the adoption of renewable energy sources and to help accelerate the move toward grid parity. In the case of Ontario's deal with Samsung the government gave Samsung an "economic adder" that amounts to a 4 per cent premium (on a price per kilowatt-hour basis) to existing feed-in-tariffs available to other solar and wind developers.

investment. BC and Quebec have attracted a number of clean-tech demonstration programs, while Ontario has sought to promote large-scale projects.

BC may want to consider a few additions to maintain competitive with other provinces:

**1. Replace incentives lost from HST**

The replacement of the PST removes three incentives that promote growth in clean-tech. For example, material and equipment used to conserve energy or produce electricity from renewable sources is currently PST exempt, but will not be exempt from HST. Alternative energy sources such as ocean, wind, solar micro-hydro power generating equipment will now be subject to 12% HST. The provincial government could consider options to implement new incentives for such key investments.

**2. Consider a feed-in tariff**

The BC Sustainable Energy Association (BCSEA) recommended that BC implement a voluntary feed-in tariff, which would allow customers to volunteer to pay extra on their hydro bills. The funds generated could be used to support FIT contracts for other renewable energy options - solar, tidal, wave, geothermal, and biogas<sup>ix</sup>, which currently find it hard to compete with legacy rates from large-scale hydro.

**3. Expand current programs**

Another option is to expand current incentives. The Acquiring Power Program and the Power Smart Program, both of which are led by BC Hydro have had successes. The Acquiring Power Program emphasizes supply-side management. It includes the purchase of electricity generated by independent power producers using biomass or other clean energy projects. It also supports a net metering program that allows customers to earn credits by transferring excess electricity generated from their own clean energy (hydro, wind, solar, geothermal, tidal, biomass) to the grid.<sup>x</sup> The Power Smart Program emphasizes demand-side management. It has a number of commercial and industrial incentives aimed at increasing energy conservation opportunities. Enhancing such incentives where appropriate would aid BC's competitiveness.

Moreover, expansion of income tax incentives targeted to clean-tech growth should offer an advantage over other provinces that may try to attract companies with large financial incentives.

**Conclusion**

The BC government has to date maintained a consistent line on the kind of subsidies and support used to attract businesses. Rather than succumb to an arms race of subsidies, which shifts costs between the ratepayer and taxpayer bases, BC has focused on incentives that attract highly trained individuals, encourage R&D investment and entrepreneurship and support early stage commercialization projects. Remaining barriers to the growth of the clean energy sector appear to be institutional: the most recent power call to independent power producers was delayed five times. If the forthcoming Clean Energy Act creates greater predictability and consistency, the province's renewable energy sector should remain competitive with its peers in other jurisdictions. Nonetheless, it is recommended that BC examine carefully the large corporate deals struck by Ontario and Quebec to determine if

additional steps need by taken in this province to encourage international investment in the clean technology sector.

---

<sup>i</sup> Globe and Mail, January 21, 2010. 'Ontario's green deal raises ire of energy developers' by Karen Howlett. <http://www.theglobeandmail.com/news/national/ontario-samsung-in-7-billion-deal-for-green-energy/article1439002/>

<sup>ii</sup> Toronto Star, January 24, 2010. 'Samsung deal keeps jobs from going south' by Tyler Hamilton <http://www.thestar.com/business/cleanbreak/article/755239--hamilton-samsung-deal-keeps-jobs-from-going-south>

<sup>iii</sup> Montreal Gazette, January 14, 2010. 'Hydro-Quebec joins testing of green car' by Kevin Mio <http://www.montrealgazette.com/business/Hydro+Quebec+joins+testing+green/2442946/story.html>

<sup>iv</sup> Ibid

<sup>v</sup> Toronto Star, January 21, 2010. 'McGuinty heralds Samsung green energy deal' by Robert Benzie & Tyler Hamilton. <http://www.thestar.com/news/ontario/article/753816--mcguinty-heralds-samsung-green-energy-deal>

<sup>viii</sup> Vancouver Sun, February 25, 2010. 'GE bullish on province's green power sector' by Scott Simpson. <http://www.vancouversun.com/business/bullish+province+green+power+sector/2611009/story.html>

<sup>ix</sup> BC Sustainable Energy Association, January 7, 2010. 'Green Energy Advisory Task Force Submission', by Tom Hackney. <http://www.bcsea.org/blog/tom-hackney/2010/01/07/green-energy-advisory-task-force-submission>

<sup>x</sup> PriceWaterhouseCoopers – Climate Change Services (2009) 'Going Green Tables: Select federal and Provincial Incentives. [http://www.sdtc.ca/en/news/media\\_releases/media\\_12012010b.htm](http://www.sdtc.ca/en/news/media_releases/media_12012010b.htm)