

INNOVATION POLICY BRIEFING

CLEAN-TECH SECTOR

Canada's innovation is lagging

Canada's economy needs greater innovation. And our commitment to reduce greenhouse gases needs a burgeoning clean-tech sector. These goals, environment and economy, are mutually supportive.



BY GREEN PARTY LEADER
ELIZABETH MAY

It has been a persistent problem in Canada's economic performance that innovation, as reflected in investments in research and development, is lagging.

The fact that our competitiveness is tied to innovation, and R&D, is not disputed.

Neither is the fact that Canadian business investment in R&D has been dropping. It has been in decline whether measured in total dollars or as a percentage of GDP. Last March, Finance Minister Jim Flaherty attempted to restructure funds for R&D to stimulate business investment. "Canada is not keeping up with other advanced economies on this crucial front," Mr. Flaherty told *The Globe and Mail*.

The policy response in the March 2012 budget was met with widespread skepticism. The Scientific Research and Experimental Development (SR&ED) tax credit program was overhauled to provide less support for such investments, and relatively more money

available for direct grants to companies selected as the lucky winners by government. And that is a strategy with an empirically lousy record. Reducing the SR&ED program by over \$500-million, less than half of that was to be re-invested in grants.

In the same *Globe and Mail* story on these changes, Jayson Myers, chief executive of the Canadian Manufacturers and Exporters, noted "The government will be hard-pressed to show how outcomes will be improved in business R&D if they're spending less money," (Barrie McKenna, "Tories target lagging innovation with funding overhaul," *The Globe and Mail*, March 29, 2012)

If looking for where government policy has been achieving solid results in innovation, a prime example has been the clean-tech investments made through Sustainable Development Technology Canada. In 19 rounds of funding approvals since SDTC's creation in 2001, 228 projects have been allocated \$560-million in funds. That level of investment has resulted in a highly-successful track record in leveraging funds from other project partners. The ratio is 2.4:1, with \$1.4-billion leveraged from \$560-million.

The clean-tech sector is one identified globally as having enormous potential. By 2020, it is estimated that the sector will be worth \$3-trillion to the world economy.

Certainly, investments in the U.S. have been outpacing Canada. U.S. President Barack Obama's new tone of resolve in addressing the climate crisis suggests that their previous level of support will be ramping up. Obama highlighted the potential of clean-tech to stimulate the economy and create jobs in his inauguration address: "We cannot cede to other nations the technology that will power new jobs and new industries; we must claim its promise."

Canada is under-performing here as well, with only one percent of the sector's current \$1-trillion global value. Still, that relatively small piece of the pie is responsible for 52,600 Canadian jobs in 700 clean-tech companies. The sector was worth over \$10-billion last year, and that was a jump of 18 per cent over the previous year.

The creation last year of the new Parliamentary all-party clean-tech caucus, chaired by Conservative MP Jay Aspin, has engaged MPs across party lines in the exciting potential for innovation in clean-tech. The sector is making gains in improving the energy efficiency of the mining sector, reducing waste water in the oil sands, cutting deeply into the price differential between renewable and coal to the point that some new wind and solar out-performs coal in terms of price.

A recent report by the Pembina Institute, (*Competing in Clean Energy: How Canada Can Capitalize on the Global Transition to Clean Energy*, Jan. 22, 2013), based on a forensic review of the sector and extensive interviews, concluded that Canada could expand our clean-tech sector to \$60-billion by 2020. That realistic assessment needs to be underscored. We have the potential for six-fold growth over the next seven years.

One of Pembina's key recommendations to build the sector, creating jobs and export opportunities for Canada, was to ensure replenishment of funds to SDTC in this spring's budget. Pembina recommended \$100-million per year for the next five years. Whether that figure is the right one, or is too low, is a matter for discussion. But it is clear that anyone watching this sector in particular, and the innovation challenge, in general, would conclude it would be a dreadful tragedy to allow the SDTC to vanish for lack of replenishment in this spring's budget.

Canada's economy needs greater innovation. And our commitment to reduce greenhouse gases needs a burgeoning clean-tech sector. These goals, environment and economy, are mutually supportive. Getting pricing signals right, setting out a clear energy and climate policy, will all help ensure that Canada does not get left behind in the rapid global pursuit of clean-technology and green alternatives.

Green Party Leader Elizabeth May represents Saanich-Gulf Islands, B.C.
news@hilltimes.com

The Hill Times

Simulating real-world strategy



Mark Halinaty, Vice-President and Managing Director, Thales Canada, Defence & Security, and Dr. Nicholas Graham, School of Computing, Queen's University.

Queen's computing researchers are working with Thales Canada, Defence & Security, a tier 1 DND supplier and premier electronic systems integrator, to investigate new ways to train army officers using simulated manoeuvres on digital, touch-sensitive tables. Using prototype computing devices and real-world training facilities, the team is finding faster, more effective ways to simulate complex decision-driven tasks faced by Canadian Forces personnel in the field.

INDUSTRY INNOVATION
RESEARCH collaboration

To learn more about collaborating with researchers at Queen's University, visit queensu.ca/industry
To learn more about Thales Canada, Defence & Security, visit www.thalesgroup.com/defence