



INNOVATION: CANADA'S INNOVATIVE CLIMATE STRATEGY



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A procession of provinces boast carbon taxes; others have embraced a cross-border cap-and-trade system; some place a levy on carbon for specified emitters; and others promote business contracts for carbon. The nation lacks commonality when it comes to carbon pricing. But with relatively low national emissions, the pan-Canadian climate strategy must also look past its fragmented patchwork to where its commonalities lie.

Now is the time to show true and patriot love for Canadian clean technologies. Actions to reduce greenhouse gas (GHG) emissions at home are necessary, but the innovative and most impactful way to lower these global emissions is to deploy clean technologies beyond Canada's borders.

CAPTURING THE BALANCE

There has been a recent growth of overt support for the continued development and deployment of clean technologies. Canada's First Ministers have committed to leverage technology and innovation; to seize the opportunity for Canada to contribute global solutions; and, in doing so, become a leader in the global clean growth economy.¹ The urgent need to take action to combat climate change through innovation and deployment of low-carbon solutions was similarly heralded by North America's Leaders at their June 2016 Summit.²

This national and continental drive for clean technology solutions is gaining momentum, but there have been obstacles

¹ "Vancouver Declaration on clean growth and climate change" (2016). Online: <http://www.scics.gc.ca/english/conferences.asp?a=viewdocument&id=2401>

² "Leaders' Statement on a North American Climate, Clean Energy, and Environment Partnership" (2016). Online: <http://pm.gc.ca/eng/news/2016/06/29/leaders-statement-north-american-climate-clean-energy-and-environment-partnership>



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that Canada has faced in its efforts to enable innovation. The Conference Board of Canada has ranked Canadian innovation as lagging, but with a recent marked improvement compared to past years.

The main challenges to innovation are a lack of financing and poor commercialization efforts.³ As in response to these highlighted challenges, Canada joined “Mission Innovation”⁴, an objective to accelerate global clean energy innovation. Under the Mission, Canada commits to double investments in clean energy innovation and collaborate with partners to promote commercialization and dissemination of clean energy technologies. Prime Minister Trudeau announced that “Mission Innovation will tap into the vast economic opportunities of our environment by helping to create the growth and jobs Canadians need.”⁵

The 2016 Western Premiers’ Conference brought agreement that for Canada to make a difference globally, a range of actions must be pursued - including technological innovation and flexible federal funding to support clean technologies.⁶ Financing is necessary and ostensibly forthcoming; but the other challenge identified by the Conference Board is commercialization. To that end, the First Ministers put the wheels in motion for climate-related technologies by deciding to encourage the sharing of information, expertise, and best practices to cultivate a business environment that favours investments.⁷

Economic benefits that stem from clean technology cannot be overlooked. Focusing on innovative climate change solutions ensures that both the environment and the economy can be balanced. Quebec’s

Premier Couillard noted that, though Quebec’s internationally-recognized cap-and-trade mechanism intends to reduce GHGs, **to ensure prosperity and the competitiveness of companies, innovation needs to be introduced in all sectors**, especially to reduce GHGs emitted by production activities.⁸

CAPTURING THE OPPORTUNITY

At the twenty-first Conference of the Parties (COP21) to the UN Framework Convention on Climate Change (UNFCCC) in Paris, 195 countries agreed to take action, while recognizing their differing situations and circumstances – a concept entrenched in the principle of common but differentiated responsibilities.⁹ The nationally determined contributions (NDCs) of the various nations are intended to curve downward the projected global temperature rise. Each party contributes its own goals towards this global effort; and parties can cooperate to help reach intended NDCs and ramp-up levels of climate ambition over time.

Canada has committed to pushing for its innovation to have a global climate impact; the world is pulling for clean-tech assistance – especially developing nations. Deployment of Canadian technologies to developing nations to reduce GHG emissions is not only a common responsibility, but it is common sense. In order to encourage far-reaching, scaled and transformative change, the United UNFCCC encourages, and has created, a mechanism for transferring technology whereby industrialized countries will provide large-scale technological and financial support to developing countries.

³ The Conference Board of Canada, “How Canada Performs: A Report Card on Canada” (2015). Online: <http://www.conferenceboard.ca/hcp/provincial/innovation.aspx>

⁴ <http://mission-innovation.net/2016/06/02/inaugural-mission-innovation-ministerial-pledges-unprecedented-support-for-clean-energy-research-and-development/>

⁵ Mission Innovation, Member Participation: Canada (2016). Online: <http://mission-innovation.net/participating-countries/#Canada>

⁶ “Western Premiers focus on jobs and communities” (2016). Online: <http://www.scics.gc.ca/english/conferences.asp?a=viewdocument&id=2422>

⁷ *Supra* note 1.

⁸ “Québec and Saskatchewan Join Forces in the Development of Research and Technologies Related to Carbon Capture and Storage” (2016). Online: <http://www.saskatchewan.ca/government/news-and-media/2016/june/16/quebec-saskatchewan-mou>

⁹ The United Nations, “Sustainable Development Goals: 17 goals to transform our world” (2015). Online: <http://www.un.org/sustainabledevelopment/blog/2015/12/the-paris-agreement-faqs/>



The Climate Technology Centre and Network (CTCN), established under the UNFCCC, will help to facilitate the transfer of technology.¹⁰ And, the Green Climate Fund (GCF), also within the UNFCCC framework, will enable investments in low-emission in developing countries.¹¹ With these mechanisms and commitments in place, **it is time for Canada to take the plunge and stay true to its renewed reputation as a climate leader. Figuring out precisely where to start should not hold back the forward motion.**

CAPTURING THE CARBON: CANADA'S ADVANTAGE

An ideal clean technology initiative that has the potential to lead the way is carbon capture and storage (CCS). **CCS is not the only solution, but it is a critical tool in the toolbox** -- without CCS, global GHG mitigation costs increase 138%.¹² But most importantly, CCS has a push and a pull factor.

Pushing for CCS are both Canadian First Ministers and North America's Leaders.¹³ Premier Wall of Saskatchewan has supported CCS, stating that innovation and the development of clean technology options, such as Saskatchewan's Boundary Dam CCS facility, have great potential to help address climate change worldwide.¹⁴

Pulling for CCS are many developing countries that have a growing middle class and demand for more electricity. Implementation of CCS in such emerging economies could meaningfully aid in decarbonization.¹⁵ Without CCS in places

like China and India, there is risk of locking the world into decades of heavy emissions, or creating stranded assets.¹⁶

The UNFCCC's technology transfer mechanism can be used to facilitate the deployment of Canadian CCS expertise and technologies to these "pulling" nations. What's more, **because of the Paris Agreement**, Canada can work to achieve its own NDC in its efforts to reduce emissions beyond its borders.¹⁷ Simply, **if deployed Canadian technology reduces emissions in another nation, Canada could be in a position to receive credit for associated GHG reductions.** More specifically, Article 6 of the Paris Agreement allows for countries, on a voluntary basis, to cooperate in reaching national targets by trading units of "mitigation outcomes". How these "cooperative approaches" are designed and implemented – via bottom-up, cross-border market linkages and a universal crediting mechanism – will be hot topics around climate negotiating tables over the coming years.

The world's emissions lower, and Canada obtains credit for its efforts to achieve an international mitigation outcome. The world of trading carbon units, underpinned by environmental integrity and robust accounting, is poised to expand exponentially over the coming years. Many nuances exist in this system, but it is the future. Bringing Canadian clean technologies to the world must form the cornerstone of our country's innovative climate strategy. ■

¹⁰ United Nations Framework Convention on Climate Change, Climate Technology Centre and Network (CTCN) (2016). Online: http://unfccc.int/ttclear/templates/render cms_page?TEM_ctcn

¹¹ United Nations Framework Convention on Climate Change, Green Climate Fund (2016). Online: http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund/items/5869.php

¹² International Panel on Climate Change, "Mitigation of climate change – summary for policy makers" (2014). Online: https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf

¹³ *Supra* notes 1 and 2.

¹⁴ *Supra* note 10.

¹⁵ Environmental Non-Government Organization "Closing the gap on climate – Why CCS is a vital part of the solution" (2015). Online: http://www.engonetwork.org/ENGO_Report_FINAL.pdf

¹⁶ *Ibid*

¹⁷ Canada's NDC includes a target to reduce GHG emissions 30% below 2005 levels by 2030