

Cleantech

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Paris to Vancouver and Washington DC: Sunny Days Ahead for Cleantech in Canada!

The March 3, 2016 Declaration¹ by the Canadian First Ministers in Vancouver marked the dawn of a new era for clean technologies in Canada. The Declaration, together with the U.S.–Canada Joint Statement,² issued by President Obama and Prime Minister Trudeau yesterday, the Paris Agreement,³ and initiatives by a number of Canadian provinces, reflect an unprecedented national and international consensus on the need for a rapid transition to a clean energy economy.

Globally, the Paris Agreement promises to help accelerate the growing clean technology (“**cleantech**”) sector to become a multi-trillion dollar global market in the coming years. The Declaration and the Joint Statement signal that Canada’s cleantech sector will comprise an increasingly important part of the Canadian economy and focus of investment activity. Also, greenhouse gas (GHG) emissions will become a key metric, across all business sectors, as such emissions are increasingly regulated and priced.

The Vancouver Declaration

At the outset, the Declaration states:

Canada stands at the threshold of building our clean growth economy. This transition will create a strong and diverse economy, create new jobs and improve our quality of life, ... We will grow our economy while reducing emissions. ...

... We will build on the momentum of the Paris Agreement by developing a concrete plan to achieve Canada’s international commitments through a pan-Canadian framework for clean growth and climate change. Together, we will leverage technology and innovation to seize the opportunity for Canada to contribute global solutions and become a leader in the global clean growth economy.

The Declaration marks a significant shift in perspective. No longer a mere environmental issue, climate change represents an opportunity (which, to date, Canada has been slow to embrace) to participate in the exponentially growing clean energy economy. Global clean energy investments hit an all-time high of US \$367 billion in 2015 – almost 50% higher than investments in fossil fuels. In Canada, the results of previous federal climate change initiatives can fairly be described as disappointing, e.g., clean energy investments in Canada fell by 46% in 2015.

Why the Declaration is Likely to Succeed

The Declaration is likely to succeed in accelerating the development and sale of clean technologies by and in Canada (and in reducing GHG emissions) for the following four reasons:

- *Economy.* The principal focus of the Declaration is on the economy, and on the opportunities for Canadians to prosper in the more efficient, clean economy of the future. The engagement of the Declaration with industry, innovation, infrastructure, finance, transportation and education, as well as the environment, provides the broad economic base necessary for success.

¹ Canada, Communiqué of Canada’s First Ministers, “Vancouver Declaration on Clean Growth and Climate Change” (Ottawa: Office of the Prime Minister, 2016) (“**Declaration**”).

² Canada, Office of the Prime Minister, “US–Canada Joint Statement on Climate, Energy, and Arctic Leadership” (Ottawa: Office of the Prime Minister, 2016) (“**Joint Statement**”).

³ UNFCCC, Adoption of the Paris Agreement, (12 December 2015), UN Doc FCCC/CP/2015/L.9 (2015) (“**Paris Agreement**”).

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- *Technology.* Clean energy technologies provide greater energy efficiencies, at competitive prices (which continue to fall). The Declaration focuses on: increased efficiency, clean electricity, the electrification of vehicles, and innovation in key technologies for clean energy, energy storage, energy usage and energy management.
- *National and Global Unanimity.* Never before have all the provinces and all the world's countries agreed to rapidly transition to clean energy.
- *Urgency.* The Declaration recognizes the need to transition to clean energy within the next 35 years. Spurred on by rising CO2 levels and impacts, the race to lead the cleantech market is rapidly increasing the scale and competitiveness of cleantech offerings.

Next Steps Under the Declaration

The First Ministers have agreed to meet again in the fall of 2016 to develop a pan-Canadian framework on clean growth and climate change. Implementation is expected in early 2017.

Appointment of Working Groups

Working Groups are, by September 2016, to identify options for action in four areas: 1. clean technology; 2. carbon pricing; 3. specific mitigation opportunities; and 4. adaptation and resilience, as follows:

1. *The Working Group on Clean Technology, Innovation and Jobs* will report on options for stimulating economic growth, creating jobs, and driving innovation through the development and commercialization of new clean energy technologies and innovations.
2. *The Working Group on Carbon Pricing Mechanisms* will report on carbon pricing options and the role they could play in meeting Canada's emissions reduction targets. It will consider the effectiveness and efficiency of alternative carbon pricing mechanisms, and their implications for Canada's economy, and interprovincial and international competitiveness.
3. *The Working Group on Specific Mitigation Opportunities* will report on options for promoting clean growth and achieving substantial reductions in GHG emissions in key sectors, including large industrial emitters, transportation, electricity generation, and buildings.

4. *The Working Group on Adaptation and Climate Resilience* will report on options for adapting to the impacts of climate change and building greater climate resilience.

Interim Federal Measures

In the interim, the Federal Government is:

- Supporting climate change mitigation and adaptation through investments in green infrastructure, public transit infrastructure and energy-efficient social infrastructure;
- Investing in reductions in GHG emissions through federal investments in the Low Carbon Economy Fund;
- Fulfilling Canada's commitment to Mission Innovation, made in Paris in December 2015, by doubling government investment in clean energy research and development over the next five years;
- Advancing the electrification of vehicle transportation, in collaboration with Provinces and Territories;
- Fostering dialogue and the development of regional plans for clean electricity transmission; and
- Investing in clean energy solutions to move Indigenous, remote and northern communities off diesel.

In addition, the Declaration requires the Federal, Provincial and Territorial Energy Ministers to collaborate on energy conservation and efficiency, clean energy technology and innovation, and other initiatives under the Canadian Energy Strategy.

The Paris Agreement

The Paris Agreement follows in the wake of the 1997 Kyoto Protocol, which did not apply to the largest emitters, but was nonetheless successful in reducing GHG emissions in the countries (principally in the EU) which acceded to it, and set the stage for the exponential growth of renewable energy and other clean technologies.

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In summary, the Paris Agreement:

- Will officially come into force when at least 55 countries accounting for at least 55% of global emissions have signed (expected to occur between April 2016 and April 2017) and acceded to it;
- Once in force, is legally binding with respect to process, requiring each of the 195 participant countries to set targets, report on them, and review and improve them every 5 years, but not with respect to the achievement of the stated targets;
- Sets out a collective commitment to keep the rise in global temperatures to “well below” 2 degrees Celsius compared to pre-industrial levels, with efforts to limit the rise to 1.5 degrees Celsius; and
- Aims to stop growth in global GHG emissions as soon as possible, and to achieve net carbon-neutrality on a global basis in the second half of this century.

In the absence of legally binding limits, the Paris Agreement's success will depend upon transparency and peer pressure, and, most importantly, upon the rapidly falling prices and growing adoption of renewable energy, electric vehicles and other key clean technologies.

How Canada is Moving Forward

The Declaration reflects Canada's commitments, under the Paris Agreement, to combat climate change and accelerate the transition to a low carbon, resilient and sustainable future. It confirms the need for investors and governments to focus on the further rapid expansion of innovation, adoption and investment in the strategically important cleantech sector.

The consensus on the urgent need for action on climate change extends across business, civil society and governments. For example, the Canadian Chamber of Commerce has identified climate change as one of the top 10 barriers to Canada's competitiveness. Large companies are demanding a federal plan for the regulation of GHG emissions to reduce uncertainty and enable investment decisions.

The Declaration and the Paris Agreement have triggered or reinforced a number of provincial initiatives which, together with new commitments and policies from the Federal Government, are creating new cleantech opportunities for Canadian businesses.

Action by the Federal Government

The current federal GHG emissions target, which was inherited from the previous Government and is viewed by the current Government as a floor, is 30% below 2005 levels by 2030.

In addition to the Declaration, the Federal Government has committed (as reaffirmed in the Joint Statement) to phase out subsidies for fossil fuels, and signed a Memorandum of Understanding with the United States and Mexico, under which it plans to share energy information and to collaborate on climate change, clean energy and innovation.

The Federal Government has also:

- Introduced interim measures and principles for reviewing natural resource projects such as pipelines, which will assess the upstream GHG emissions associated with the project;
- Committed to endow a \$2 billion Low Carbon Economy Trust to fund projects that reduce emissions, with a focus on renewable energy; and
- Pledged \$300 million to the global Mission Innovation initiative for clean technology development.

Action by the Provincial Governments

Current provincial programs and targets, apart from those in Ontario, include the following:

- British Columbia has a carbon tax of \$30/tonne CO₂ eq. and an emissions target of 33% below 2007 levels by 2020, and all new cars will be zero emissions vehicles by 2050;
- British Columbia and Quebec each provide substantial incentives in the form of rebates for new electric vehicles (EVs);
- Alberta is implementing a carbon tax, a cap on oil sands emissions, and is phasing out coal power by 2030;
- Manitoba has announced a new 5-year \$5 million Climate Change Action Fund, which will be invested across sectors such as transportation and innovative energy projects;
- Manitoba has joined Ontario and Quebec in the cap and trade system, and has an emissions target of 30% below 2005 levels by 2030, with the aim of being carbon-neutral by 2080;

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- Quebec was the first province to implement the cap and trade system, and has an emissions target of 20% below 1990 levels by 2020; and
- New Brunswick, Newfoundland and Labrador, Prince Edward Island and Nova Scotia have together set a target of reducing emissions by between 35-40% below 1990 levels by 2030.

Ontario's Initiatives and Funding of Cleantech

Ontario has taken a number of significant steps to reduce GHG emissions and increase cleantech opportunities. Its targets and initiatives include the following:

- Ontario's emissions target is 37% below 1990 levels by 2030, and 80% below 1990 levels by 2050;
- Ontario continues to procure renewable energy under the 2009 Green Energy Act;
- Ontario issued Green Bonds in 2014 and 2016 totalling \$1.25 billion to finance transit and other green projects, and announced a \$325 million Green Investment Fund in 2015 for projects to fight climate change;
- With British Columbia and Quebec, Ontario has signed the "Under 2" MOU, to reduce GHG emissions to 2 metric tons CO₂-equivalent per capita by 2050;
- Ontario has signed an MOU with Quebec and Manitoba linking their cap and trade programs under the Western Climate Initiative with California;
- Ontario announced a new program to create a network of fast-charging EV stations in December 2015 and in February 2016 updated its EV incentive program;
- In February 2016, Ontario announced \$74 million in cleantech innovation support, to help reduce industrial GHG emissions, and \$25 million in a Green Smart energy efficiency program, to assist small and medium-sized businesses to reduce GHG emissions; and
- Ontario's draft cap and trade legislation, also released in February 2016, is to dedicate the

proceeds of emission credit sales, estimated to be \$1.9 billion in 2017, to green investments such as:

- o Energy management technologies for load-shifting and energy storage;
- o Geothermal solutions;
- o Insulation and other technologies to eliminate or reduce GHG emissions from buildings and neighbourhoods; and
- o Infrastructure to support zero-emission and plug-in hybrid vehicles, and low-carbon alternative fuels.

Increasing Investments and Opportunities

Opportunities to invest in renewable energy are growing rapidly. In 2015, despite the falling prices of oil, coal and natural gas, global investment in clean energy was a record US \$367 billion.

Moreover, renewable energy is steadily replacing coal, natural gas, and oil, as the principal source of new electrical power generation. The crossover occurred in 2013, when the renewable electricity capacity added to the grid exceeded the additional fossil energy capacity (by 143 GW to 141 GW). The trend is expected to accelerate as the prices of solar and wind energy continue to fall, and volumes continue to grow, in coming years.

The steps taken, and to be taken, by the Canadian governments to transition the Canadian economy to clean energy will create substantial business and investment opportunities. In addition, there will be increasing opportunities in energy storage, EVs, heat pumps, smart grids and the other clean technologies required for the transition to a low carbon economy.

Members of our Cleantech Group are actively tracking legal developments in this area, as the Federal and Provincial Governments continue take steps to implement the Declaration and the Paris Agreement.

For further information, please contact any member of our [Cleantech Group](#).