Canada

***Overall Rank:* 1**

Type: Large Market; Large Market Share

Canada ranks #1 on ITA's list of top renewable energy export markets through 2015. Over the next two years, Canada will likely account for nearly one-third of all U.S. renewable energy exports. Its proximity to the United States and the close commercial relationship many U.S. suppliers enjoy in Canada provide exporters a favorable environment to sell their products or services. Local content requirements in Ontario and Québec, however, threaten to undermine U.S. export competitiveness and may pose a significant barrier for some renewable energy exporters.

Sub-Sector Rankings

Ethanol	Geothermal	Hydropower
1	N/A	1
Pellets	**Solar**	**Wind**
9	1	2

Over the past several years, Canada has undergone dramatic changes in its energy sector, including new renewable energy development that has arisen alongside – and in some cases as a result of – the expansion of unconventional fossil fuels. For the foreseeable future, Canada will continue to be an energy superpower, producing clean energy, but also investing heavily in oil sands and shale gas development.

Estimates indicate that Canada will need 42 GW of new generating capacity to both meet expected demand increases (although minimal compared to other countries) and replace existing generation capacity from plants that will be decommissioned over the next two decades. Given the interwoven nature of U.S. supply chains in Canada, this development foretells significant future exports. Unfortunately, Canada's two most import provinces for renewable energy to date – Ontario and Québec – maintain strong local content requirements, which can limit opportunities for American exporters.

Overview of the Renewable Energy Market

Most of Canada's clean energy policies are created and enforced at the provincial level. In provinces with effective policies, growth in the renewable energy sector has been relatively strong. British Columbia's smart metering program, Ontario's Feed-in-Tariff (FIT) regime, and Québec provincial clean energy mandate have all led to increased investment in the sector.

To date, Ontario and Québec have been the most supportive provinces for renewable energy. Ontario's Green Energy and Green Economy Act of 2009 established a strong FIT scheme that facilitated the installation of 4.5 GW of new renewable energy capacity in just four years. When it was enacted, the FIT program targeted the installation of 10.7 GW of new non-hydropower renewable energy by 2018 and 9 GW of new hydropower capacity by 2030, putting Ontario on track to be a key global clean energy market.[1]

In 2012-2013, an updated FIT program recorded a slowdown and is currently under review for possible additional changes. It remains to be seen whether Ontario can maintain its attractiveness to renewable energy investors with its new FIT rules in place. Early indications show that other markets have become more attractive, with investment likely waning in Ontario as a result.

In Québec, the provincial Energy Strategy mandates that an additional 4 GW of new wind energy and 4.5 GW of hydropower capacity be brought online by 2015. To support both goals, the Province of Québec launched a cap-and-trade program in January 2013, although the impact of the program remains unclear.

Some analysts believe that over time the program will support additional renewable energy development, but ITA remains skeptical that the cap-and-trade program will have any more than a marginal impact on the sector.

Renewable energy deployment in other provinces remains mixed. Nova Scotia implemented a community FIT accessible to municipalities, First Nation communities, and not-for-profit groups. Saskatchewan has extended its net metering rebate program for projects of less than 100 kW. And New Brunswick has a renewable energy target in place that should support new wind power development.[2]

One exception to the focus on provincial level policies is the biofuels sector, where Canada has a national minimum requirement of 5 percent renewable content in gasoline and 2 percent in diesel and other distillate heating oil.[3]

Challenges and Barriers to Renewable Energy Exports

Despite Canada ranking as the top market for U.S. renewable energy exports through 2015, export growth is expected to be tempered somewhat by strong local content requirements and the presence of foreign-flagged manufacturers in the market.

Québec has the most stringent local content requirements for renewable energy in Canada, stipulating that 60 percent of a project's cost, and 30 percent of wind turbine costs), be spent in the province. Ontario's local content policies were found to be inconsistent with Canada's obligations under World Trade Organization agreements, and while the province has reformed its incentives, it remains to be seen if the market will open substantially to foreign suppliers.

Unfortunately for many U.S. exporters, Canada's manufacturing capacity has grown as a result of the local content requirements (LCR) in these two provinces. Repower and Enercon – two German-based companies – are the only manufacturers to have operations in Québec, and consequently hold all the contracts for wind projects currently under development in the province.[4]

Additionally, the overall impact of Canada's growing fossil fuel industry on U.S. renewable energy exporters remains unclear. ITA expects that renewable energy will face expanded competition for limited financial resources and political support from traditional fossil fuel resources, particularly in Western Canada.

For example, Alberta – Canada's only completely deregulated electricity market – has seen its power demand increase as a result of oil sands development and the decommissioning of fossil fuel plants. Thus, Alberta may be a good candidate for the expanded use of renewable energy. The province has strong wind resources and falling clean energy prices may make the clean energy sector economically competitive with other forms of energy.

Opportunities for U.S. Companies

Wind

To be successful, wind energy exporters will need to bring creative solutions and niche product or services to the market. *Bloomberg New Energy Finance* expects 6.7 GW of new wind capacity to be brought online in Canada by 2015, but thus far, every announced turbine contract has gone to a firm with local manufacturing. Even products that were previously imported, such as nacelles for the wind industry, are likely to be sourced locally in the future.

U.S.-based component suppliers may find some opportunities selling to turbine manufacturers, but in the short-term, exports are likely to be only in the form of services. Environmental impact consultants, financiers, engineers, and control system designers should all find opportunities.

Hydropower

Canada also ranks first on ITA's list of top hydropower export markets. The market is expected to support close to 80 percent of all hydropower exports from the United States through 2015, although it will only account for 7% of the growth in hydropower capacity globally in that time.

In 2012, the Canadian Hydropower Association estimated that the country has 163 GW of untapped hydropower capacity. Currently, there are only 25 GW of hydropower under construction or in advanced planning.[5] The majority of new development is planned for the provinces of Québec, British Columbia, and Labrador and hydropower export promotion activities in the sector should be focused on these locations.

Ethanol

ITA also expects Canada to be the top biofuels market through 2015. In 2013, more than half of all U.S. ethanol exports were shipped to Canada, valued at over $775 million. Given current incentives in Canada at both the national and provincial levels, as well as the ease of cross-border transport via rail, the competitive position of U.S. exporters in Canada should continue.

Canada's federal mandate of 5 percent ethanol blending (7.5 in Saskatchewan and 8.5 percent in Manitoba) is lower than the 10-15 percent blends in the United States, but production levels are not sufficient to meet the expected 2.7 billion liter annual demand.[6]

Solar

Canada ranks first in terms of solar export opportunities through 2015. Although Canada ranks only 14th globally in terms of expected solar installations through 2015, the country's limited manufacturing capacity in the sector may create opportunities for exports of U.S. solar equipment. Ontario, Québec, and British Columbia have developed emerging solar energy clusters that may support additional development into the future.

Upcoming Renewable Energy Trade Events for Exporters interested in Canada:

- **All Energy Expo and Conference**; *April 9-10, 2014* – Toronto, ON
- **Canadian Wind Power Conference (CanWEA)**; *October 27-30, 2014* – Montreal, QC

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2014 *Renewable Energy Top Markets Report*

This *Top Markets* case study is part of a larger report that includes rankings of 75 different markets in terms of overall U.S. renewable energy exports through 2015, as well as specific rankings for the ethanol, geothermal, hydropower, biomass pellets, solar and wind sectors. To access the full report, visit http://export.gov/reee/topmarkets.

[1] Ontario Ministry of Energy, "Ontario's Feed-In-Tariff Program: Two-Year Review Report," March 2012.
[2] Ernst & Young, "Renewable Energy Investment: Canada," April 2012
[3] There is an exception for less populated regions in Canada. (BNEF Country Dashboard: Canada)
[4] *Bloomberg New Energy Finance*, "A bout, then a drought, in the Great White North" (February 22, 2013) pp. 13
[5] Eli Lehrer, "By the Rivers of Québec: The cheap, green answer to our electricity needs," *The Weekly Standard*, Vol. 18, No. 12, 2012.
[6] USDA, Canada Biofuels Annual, June 2013. http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_Ottawa_Canada_6-28-2013.pdf

About the Office of Energy and Environmental Industries

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