M&A in the Canadian Renewable Energy Sector

Home grown growth

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pwc

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Canada is home to a growing renewable energy market and is establishing itself as a leader in North America. Our public equity markets are recognized as global centres for equity financing and our government subsidies and support have been trailblazing in North America.

However, to date Canadian renewable energy M&A deal activity has lagged the global trend. This report presents six trends that suggest Canadians will be at the forefront of global renewable energy deal-making going forward.

Deal Tally
Green equals growth

Before delving into the details of expected deal trends, we briefly highlight select M&A facts and figures.

Deal volume in the global renewable energy sector is set to close at an all time high this year.

- 321 renewable energy transactions have been announced year to date, implying an annual run rate of 385 deals – a historic high.

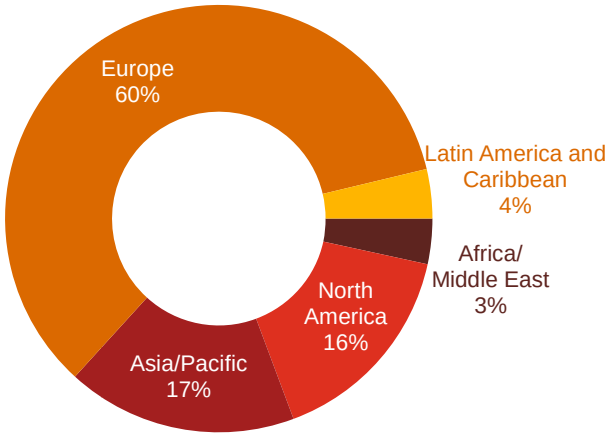
Global Renewable Energy M&A Deals

Source: CapitalIQ, PwC analysis

Growth has largely occurred outside of North America; Canadians are less active.

- Renewable energy M&A remains concentrated outside of North America. Targets in Europe and Asia represent the lion's share of activity, while North American targets represent approximately 16% of global deal volume.

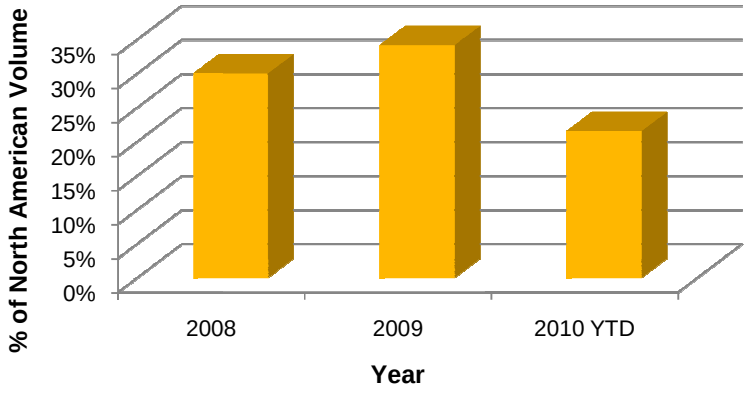
2010 Deal Activity by Region



Source: CapitalIQ, PwC analysis

- Within North America, Canada's share of deal activity is declining. In 2008 and 2009, Canadian entities were targets in 30% and 34% of all deals respectively. In 2010, however, only 22% of North American deals had a Canadian target.
  - As a proxy for what level of Canadian activity is "normal" in a leading sector, consider that close to 40% of global energy deals in 2009 had a Canadian target and close to 50% of mining deals had a Canadian target.

Canadian Targets as % of North American Deals

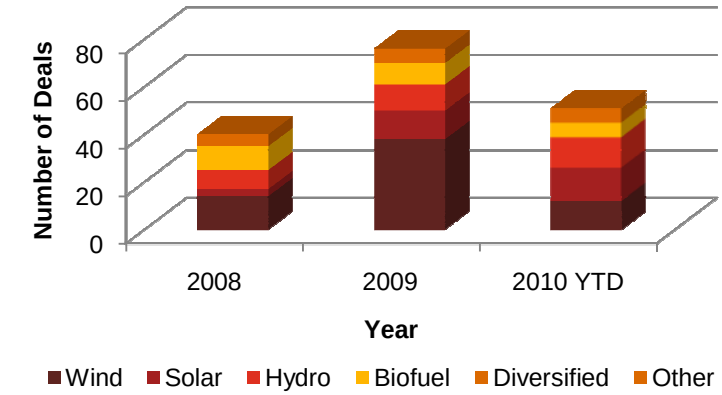


Source: CapitalIQ, PwC analysis

Activity is dominated by three subsectors.

- **Wind**, **solar** and **hydro** targets represent close to 75% of year-to-date deal activity (biofuel, diversified and other renewable energy targets represented the remaining 25%).
- Among the "big three", acquisitions of solar and hydro targets are on the rise.
  - Year-to-date 2010 solar deal volumes are 16% higher than 2009's while hydro deal volumes are 18% higher.
  - Wind deal volumes on the other hand are 50% lower than 2009. However, this decline is attributed to over-inflated 2009 deal volumes from regulatory incentives prompting a one-off flurry of deals and developers rushed to acquire and develop advanced wind projects.

Renewable Energy Deals by Technology



Source: CapitalIQ, PwC analysis

M&A Outlook
Dawn in Canadian Renewables

Although Canada has been a small part of global renewable energy M&A activity to date, we expect Canada will take an increased role and exert more influence in shaping the sector for six key reasons:

1. Aggressive Canadian regulation to spur domestic venture capital and private investment activity.

- During 2010, Canadian governments continued implementation of key support programs for the renewable energy sector, including:
  - The Ontario Feed in Tariff (FIT) program, the first of its kind in North America, offers guaranteed pricing for energy generated from renewable sources, including biomass, biogas, landfill gas, on-shore and offshore wind, solar photovoltaic, and hydro. The FIT program was launched in late 2009 and by early 2010, 184 contracts were allocated totalling approximately 2,500 MW. It is anticipated that in late 2010, a second round of FIT contracts will be offered.
  - BC passed the Clean Energy Act in June 2010. The act increases the conservation target for BC Hydro with a commitment to meet 66% of electricity demand growth through efficiency and conservation by 2020. The Act incorporates a number of government initiatives and subsidies for the bioenergy, geothermal, fuel cells, hydroelectricity, solar and wind subsectors.
  - The Government of Canada's $1 billion Clean Energy initiative launched in 2009, continues to allocate funds to technology development and demonstration projects in clean energy. Support is specifically earmarked for renewable energy projects, integrated community energy solutions, and smart grid technologies.
  - Federal, provincial and territorial ministers are in discussions about a National Energy Program (NEP) for Canada. Details have not been articulated, but most expect the NEP to focus on identifying energy strategies for Canada that would reduce greenhouse gas emissions by 2050 to 80 percent below 1990 levels, and to make Canada a global role model in sustainable energy generation.
- How does regulation promote M&A? Government subsidies and sector support provide clarity on a renewable energy project's economic return. This, in turn, tends to spur venture capital, corporate and private investment activity. In 2009, for example, Ontario's popular FIT, program helped drive Canadian deal volumes up by 116% over the prior year, the most notable deal being a $7-billion transaction between the Ontario Government and the **Samsung Group**. This collaboration provided Samsung with access to 2,500 MW of transmission connection along with a 1 cent per kilowatt-hour sweetener on top of Ontario's FIT rates. In return, Samsung agreed to build two wind turbines and two solar power manufacturing facilities in Ontario between 2013 and 2015, forecasted to generate 16,000 jobs for Ontario.

2. Sector maturation combined with limited access to project finance to fuel horizontal and vertical consolidation.

- The Canadian renewable energy industry is highly fragmented. Consistent with most emerging sectors, the majority of players are undercapitalized junior developers and there is no clear market leader.

- The Canadian market for renewable energy finance is young and traditional banks struggle to meet the long-term capital requirements sought by developers for their projects. Although life insurance companies are active in the sector, with a limited amount of capital to allocate to renewables, the market for Canadian project finance is a major impediment for development.

- At this juncture, the Canadian sector is ripe for consolidation. Many junior developers and their projects are approaching maturation and are ready for construction. Therefore, commercial operation will only become a reality via full or partial divestiture to larger entities with strong balance sheets and the ability to access project finance. A recent case in point is **International Power of Canada**'s partial acquisition of **Sea Breeze Energy Inc.**, owner of the Knob Hill Wind Farm development. Construction on Knob Hill Wind Farm's Phase 1 is expected to begin in 2011, with a target date for delivery of electric power in late 2012. Phase 1 of the project, to be funded by International Power, is projected to generate sufficient renewable power to provide for the annual electricity needs of approximately 100,000 British Columbians.

- As projects approach commercial operation, we also expect to see some vertical consolidation. Specifically, equipment manufacturers will utilize M&A as a means to assist developers to reach critical milestones (thereby securing demand). A recent notable deal is **First Solar Inc**.'s acquisition of a portion of **Edison Mission Group**'s (EMG) solar project development pipeline. First Solar is one of the world's largest solar module manufacturers and utility systems providers. According to Lisa Bodensteiner, First Solar vice president of business development for North America, the deal *"... builds on our strategy to cultivate robust and predictable module demand in utility-scale applications."*

3. Canadian corporate social responsibility frameworks to prompt a flurry of investment and mergers to meet corporate demand for clean energy.

- Across Canada, several major corporations have made investments in Canadian renewable energy projects:

  - **Loblaw Companies Limited** is undertaking a pilot project to install innovative solar technology on the rooftops of four stores in Ontario. If successful, Loblaw may move forward with over 100 rooftop installations across the province.

  - **Ikea Canada** announced plans to install solar panels on three Ontario stores. The projects are anticipated to produce enough energy to power 100 homes annually.

  - **Loyalty One Inc.** completed Canada's first large-scale rooftop solar installations at its Mississauga call centre location. *"We strongly believe that businesses have a role to play in protecting the environment,"* said Bryan Pearson, president of LoyaltyOne.

- Naturally, renewable energy production capacity will have to swiftly ramp up to meet increasing demand from Canadian corporates. This should prompt many firms to seek out deal partners to achieve economies of scale and service corporate end users.

- In select cases, corporations will be direct investors in the sector. For example, **Google**, through its Green Business Operations division, has agreed to co-invest with **Trans-elect**, **Good**

Energies and **Marubeni Corporation** in offshore transmission projects along the Mid-Atlantic coast. When complete, the project is anticipated to connect 6,000 MW of offshore wind – enough power to serve approximately 1.9 million households with clean energy."

4. Inflation indexed yields offered by renewable projects to attract institutional capital.

- Pre-2008, large institutional funds were not active investors in Canada's renewable sector. This was largely due to long investment horizons and the uncertainties of commercial success associated with an emerging sector.

- In today's investment climate, however, funds are increasingly seeking out investments that can provide inflation indexed long-term yields. As a result, we expect that projects subsidized by the Canadian government, which are effectively guaranteed annuities indexed to inflation, will be highly attractive targets for institutional and pension funds.

- Recent notable sector activity from large funds includes:

  - **Firelight Infrastructure Partners**, a joint venture between **OPTrust Power Holdings** and **Dundee Realty**, has invested over $100 million in renewable energy projects across North America since 2006, including the partial funding of Nova Scotia-based **RMS Energy**'s debut $130-million 51 MW wind project in 2009.

  - In June 2010, **Macquarie Power & Infrastructure Income Fund** (a $350-million infrastructure portfolio publicly traded on the TSX) acquired 20 MW solar photovoltaic power project in Amherstburg from **SunPower Energy Systems Canada Corporation** for $100 million. *"The Amherstburg Solar Park is an excellent addition to MPT's existing portfolio of low-risk, stable power infrastructure assets. It also offers important environmental and local economic benefits while supporting the Province of Ontario's green energy mandate,"* said Michael Bernstein, president and chief executive officer of MPT. *"SunPower's solar power expertise and superior technology, plant design and construction are proven globally. When completed, the Amherstburg Solar Park will contribute to MPT's long-term cash flow stability."*

- Fundraising for renewable energy-specific investment vehicles has been more prevalent in the US and certain western European nations than in Canada. As such, we expect that when regulatory considerations permit, foreign capital will flow into the Canadian renewable energy sector.

5. Long-term growth opportunities in the renewable sector to incent utilities and oil and gas players to make opportunistic Canadian buys.

- Nations are increasingly concerned about petroleum scarcity and the geopolitical risks associated with dependence on OPEC nations. Energy security is of particular importance to the US, the largest net importer of petroleum-based energy on the globe. Renewable energy sources are one of few viable solutions to this dilemma. Indeed, the European Renewable Energy Council (EREC) and Greenpeace International expect that renewable energy can provide all global energy needs by 2090.

- Considering that renewable sources currently provide only a fraction of global energy needs, long-term growth opportunities in the sector are compelling. As a result, traditional utilities and oil and gas players will likely seek to increase their portfolio exposure to renewable by investing in innovative renewable technologies and projects. For example in 2009, UK-based utility company **International Power PLC** acquired **AIM PowerGen Corporation**, a Canadian developer and manufacturer of wind power generation facilities, for $119 million.

6. Emerging market growth to incent Canadians to "look past the US border".

- Brazil, China, and India are among the fastest growing regions in the renewable energy sector. Economic and population growth in these countries has resulted in an increased need to power households, automobiles and domestic production. To help meet demand in a sustainable fashion, governments in each of these nations are implementing numerous FIT and other subsidy programs.

- In each of Brazil, China and India, local firms interested in bidding on government programs or capitalizing on sector dynamics have a time-to-market need for innovative renewable technologies and project management expertise.

- Where regulations permit, Canadians are well positioned to partner with firms in Brazil, China and India due to:

    - The renewable energy arm of Canada's **Brookfield Asset Management** – a case in point in regard to the opportunities for Canadians in emerging markets. As the largest and growing independent power producer in the small hydroelectric segment in Brazil, **Brookfield Renewable Power** is a recognized preferred local operating partner and has been a significant investor in the country for many years. The company owns and operates 34 hydropower facilities and continues to acquire and develop renewable energy projects in Brazil. Indeed, Brookfield Renewable Power is known to be one of the most cost-effective producers of electricity in Brazil.

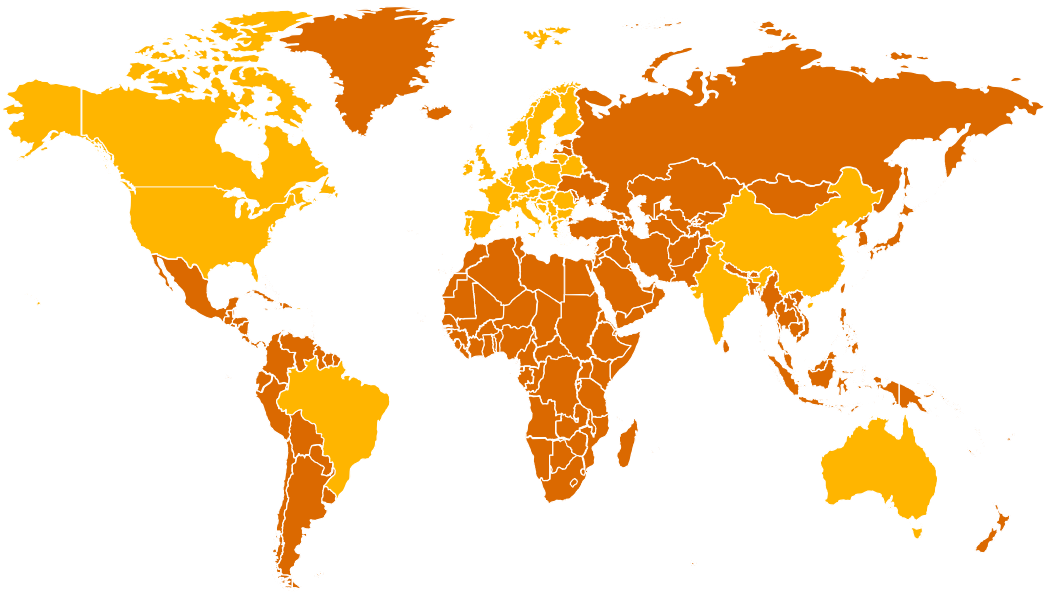
    - Expertise in bringing wind, solar and hydropower projects to market.

    - Access to equity finance via Toronto's public exchanges, both acknowledged as global centres for cleantech financings (i.e., Canadian-listed **Cleantech** and renewable power companies raised $1.5 billion in equity capital during 2009).

    - Favourable macro conditions, including fiscal stability and a strong dollar.

Canada, the US, Europe, and Australia are the fastest growing renewable energy markets in the developed world.

China, India and Brazil are the fastest growing renewable energy markets in the emerging world.



Notable Canadian Transactions

(YTD as at October 31, 2010)

Announced Date	Target Company	Acquirer Company	Consideration
9/21/2010	**Pristine Power, Inc.** (TSX:PPX). Pristine Power Inc. engages in the development, ownership, and operation of independent power plants in Canada. Its power plants generate electricity and steam from natural gas, waste heat, biomass, hydro, and wind resources.	**Fort Chicago Energy Partners LP** (TSX:FCE.UN) Fort Chicago Energy Partners LP is an energy and resource firm that engages in investing in and managing businesses that generate, transport, store, market, process, and produce energy, minerals, or chemicals.	C$118 million.
6/23/2010	**SunPower Energy Systems Canada Corporation** *an operating subsidiary of* **SunPower Corporation** (NasdaqGS:SPWR.A) SunPower Energy Systems Canada Corporation operates as a subsidiary of SunPower Corporation. SunPower Corporation, together with its subsidiaries, designs, manufactures, and markets solar electric power technologies. The Systems segment sells solar power systems directly to system owners and developers.	**Macquarie Power & Infrastructure Income Fund** (TSX:MPT.UN) Macquarie Power & Infrastructure Income Fund operates as an unincorporated open-ended trust in Canada. The company, through its subsidiaries, invests in, owns, and operates power infrastructure assets, including gas cogeneration, wind, hydro, and biomass power generating facilities.	Undisclosed.
6/16/2010	**TransAlta Corp** (TSX:TA) TransAlta Corporation operates as a non-regulated electricity generation and energy marketing company. The company engages in the production and sale of electric energy through its diversified portfolio of facilities fuelled by coal, gas, hydroelectric, wind, geothermal, and biomass resources in Canada, the United States, and Australia.	**Sun Edison LLC** *an operating subsidiary of* **MEMC Electronic Materials Inc.** (NYSE:WFR) Sun Edison LLC provides solar energy services and owns and operates power plants in North America. Its services include renewable power, monitoring, marketing, renewable portfolio standards, and solar tariff services. It provides solar-generated energy to commercial, government, and utility customers.	Undisclosed.
6/7/2010	**C-Free Power Corp.** (Private) C-Free Power Corp is a renewable energy company. The company produces clean and carbon-free power through the development of wind and run-of-river water power facilities in western Canada.	**Sequoia Energy, Inc.** (Private) Sequoia Energy Inc. is a North American renewable energy company. The company primarily focuses on wind energy projects in western Canada and the United States Midwest; with projects as far east as Ontario and as far south as Texas.	Undisclosed.

Announced Date	Target Company	Acquirer Company	Consideration
6/22/2010	**Swift Power Corp.** Formerly (TSX:SPC) (Now Private) Swift Power Corp. operates as a development-stage, independent, run-of-river hydroelectric power company. It is developing renewable power projects in British Colombia and in other provinces of Canada, as well as internationally.	**Fort Chicago Energy Partners LP** (TSX:FCE.UN) Fort Chicago Energy Partners LP is an energy and resource firm that engages in investing in and managing businesses that generate, transport, store, market, process, and produce energy, minerals, or chemicals.	C$8.5 million cash.
5/31/2010	**Sierra Geothermal Power Corp.** (TSXV: SRA) Sierra is a geothermal energy company focused on the exploration and development of clean, sustainable power in Western North America. Sierra has 100% control over its 120,000 acre portfolio of geothermal properties in Nevada, California and British Columbia. Sierra's projects have a combined total estimated capacity of almost 400 MW.	**Ram Power, Corp.** (TSX:RPG) Ram Power is a renewable energy company engaged in the business of acquiring, exploring, developing, and operating geothermal properties and has interest in geothermal projects in the United States, Canada, and Latin America.	$27 million in stock (at a rate of 1 share of Sierra for 0.08 shares of Ram).
2/9/2010	**StormFisher Biogas** (Private) StormFisher Biogas, a renewable energy company, develops and operates biogas-based renewable energy installations to power electrical generators in North America. The company produces electricity, natural gas, and thermal energy.	**Greenhouse Gas Services, LLC** (Private) Greenhouse Gas Services, LLC supplies greenhouse gas (GHG) credits to offset emissions from operations, products, and services for industrial and consumer-facing corporations in the United States. The company invests in and develops projects that reduce GHG; finances and certifies GHG credits; and offers carbon management solutions.	Undisclosed.
2/1/2010	**Interwind Corp.** (Private) Interwind Corp. operates as a developer of renewable energy projects. It engages in project development, including exploration, construction, and operation of renewable energy projects, such as wind, solar, and hydro projects in Canada, the United States, India, and Panama.	**Emera Inc.** (TSX:EMA) Emera Inc., through its subsidiaries, engages in the generation, transmission, and distribution of electricity to the residential, commercial, and industrial customers in northeastern North America. It generates electricity through coal, oil, natural gas, hydro, and wind energy sources.	Undisclosed.
7/26/2010	**Sea Breeze Energy** *an operating subsidiary of* **Sea Breeze Power Corp.** (TSXV:SBX) Sea Breeze Power Corp. operates as a renewable energy that develops hydro-electric, wind power generation, and transmission projects primarily in British Columbia, Canada. It owns wind power generation projects in north Vancouver Island, north central coast, Okanagan, and Peace River regions.	**International Power Canada, Inc** *Private Co. subsidiary of* **International Power plc** (LSE:IPR) International Power plc operates as an independent power generation company. It primarily engages in the development, acquisition, and operation of power generation plants. The company generates electricity from various sources, including gas, coal, wind, solar, pumped storage, oil, and water.	Undisclosed.

Outlook

The future of the Canadian renewable sector does indeed look bright.

With the right long-term policies and increased access to long term capital, our nation is set to be a cornerstone of one of the most critical global sectors of the millennium.

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All dollar amounts are expressed in US dollars, unless otherwise indicated. All data referenced YTD as at October 31, 2010.

Sources: mergermarket, CapitalIQ,, company websites, press releases and PwC analysis.