Ontario Wind Energy Market Profile

Canada ranks ninth in the world in total installed wind energy capacity with more than 8,400 MW – producing enough power to meet the annual needs of approximately 2 million Canadian homes.

Ontario is Canada's leader in clean wind energy with more than 2,750 MW of installed capacity, supplying over 3 per cent of the province's electricity demand. In 2012 – for the first time ever – more electricity was generated in Ontario using wind than coal. Ontario has now become the first jurisdiction in North America to eliminate coal as a source of electricity generation.

Wind energy is helping Ontario build a stronger, cleaner and affordable power system; creating new highly-skilled jobs and delivering local benefits at prices that are cost-competitive with other new sources of electricity. Ontario has been a leader in new installations of clean wind energy, with more than 420 MW of new capacity commissioned in 2013, representing $1 billion in new investments.

Ontario has a range of options for new electricity generation but few that match wind energy's affordability, economic development potential, environmental sustainability, reliability and rate base value. Wind energy developments are contributing to increasingly diverse, made-in-Ontario supply and value chains that are fueling new investments and competitive advantages in Ontario's green energy economy.

The cost-competitiveness and cost certainty of wind energy supply provides security for ratepayers and taxpayers, with considerable environmental, health and local community benefits. Wind energy is cheaper than new nuclear power and cost-competitive with new hydroelectric power. Unlike new nuclear or new hydro, the cost of developing wind energy projects continues to fall sharply as new turbine technology boosts output, and economies of scale reduce production and supply costs.

Procuring a stable and steady stream of wind energy complements energy conservation measures, and provides Ontario with unprecedented flexibility to align electricity supply needs with changing economic and environmental circumstances.

The Market

Ontario's wind energy market has successfully attracted the interest of companies from around the world, facilitating investment and job creation that has made Ontario a North American leader in renewable energy development. Hundreds of much-needed jobs have been created in places like Windsor, Tillsonburg and Niagara, and thousands more are being created across the supply chain as well as in construction and local services.

As of 2013, Ontario's Independent Electricity System Operator (IESO) is now able to use the inherent flexibility of wind generation to help balance demand. According to the IESO, "Wind generation has taken on a whole new role in the Ontario electricity system – moving from a passive resource to one that is actively used to balance supply against demand. The dispatch of wind has become an effective tool to manage surplus baseload generation."

Regulatory Regime

Governments in advanced economies around the world recognize the importance of blending increasing amounts of wind energy in the electricity supply to meet public needs.

In June 2013, Ontario instituted a new competitive procurement program that considers input from stakeholders, municipalities and Aboriginal communities to help identify appropriate locations and siting requirements for wind and large scale renewable energy projects.

The current Long Term Energy Plan in Ontario (LTEP) provides targets of 300 MW of new wind energy capacity in 2014 and 2015, with additional procurement opportunities identified for 2016. Establishing a clear and stable schedule for future wind energy procurement will enable continued growth in Ontario's rapidly emerging wind energy supply chain and ensure that the province remains a prime destination for global wind energy investment.

Looking beyond 2018, CanWEA believes the government should identify a long-term target of a minimum of 15 per cent of electricity demand being met by wind by 2031.

Community Engagement and Public Consultation

Effective and meaningful community engagement is fundamental to the success of a wind energy project and ultimately to the success of the industry globally. CanWEA's ***Best Practices in Community Engagement and Public Consultation*** guide has been designed to support wind energy project developers in continuously improving their work with local communities while ensuring that they meet and strive to exceed provincial requirements for public consultation.

CanWEA interviewed dozens of stakeholders, supporters, opponents and experts in consultation and the feedback received informed the Best Practices guidelines. To support this initiative, CanWEA hosted a series of cutting-edge training sessions for members to help build skills and capacity within the wind energy sector. CanWEA is now in the process of developing Version 2.0 of these guidelines which will include new tools, strategies and case studies that reflect the reality of developing wind energy in the current economic and political environment.

The Numbers (May 2014)

Total installed capacity: 2,786.5 MW
Number of projects: 55
Number of wind turbines: 1,469

Ontario represented 26 per cent of Canada's new wind energy capacity installed in 2013.

Over 300 MW of new wind capacity has been commissioned thus far in 2014.

Pipeline: 2,000 MW of wind energy projects are now either under construction or at different stages of the permitting and approvals process in Ontario.