

Executive Summary:

Ontario PV Market Forecast 2011-2015

Q1, 2011 (UPDATED February 24, 2011)

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Other Titles in the Ontario Photovoltaic Market Access Service:

- Ontario PV Market Forecast 2010-2015 (September 2010)
- Insights into Silicon in Ontario's PV Market (October 2010)
- Jobs and Economic Impact of Solar PV in Ontario (November 2010)
- Insights into the Impact of Long Term Energy Plan on PV Markets in Ontario (December 2010)
- Ontario PV Installer Survey (February 2011)

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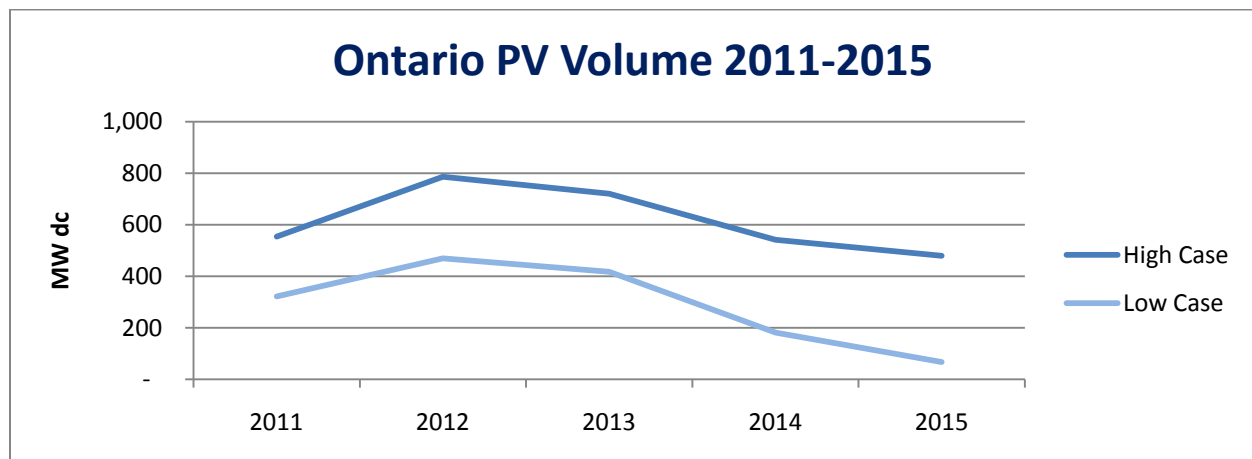
Executive Summary

Key Findings:

- Ontario's Photovoltaic (PV) market is expected to reach cumulative installations of 2,650 MW¹ by 2015. This includes demand from the Feed In Tariff (FIT) program, the Renewable Energy Standard Offer (RESOP) Program, and the Samsung (also referred to as the Korean Consortium) agreement
- In 2011, 455 MW of new PV installations are expected in Ontario
- Delays during the permitting process will push the vast majority of FIT utility-scale demand back into 2012-2013
- An increasing number of suppliers, reduced global costs, and delayed demand have combined to drive expected module prices down in Ontario
- By the second half of 2011, module supply constraints will be eliminated

Market Forecast

With approximately 2,450 MW of existing solar contracts, Ontario's PV market will experience strong growth from 2011-2012. Beyond 2013, the market will shrink significantly in response to ratepayer concerns, transmission constraints, and the limited size of Ontario's electricity market.



Supply and Demand

Domestic Content Requirements (DCR) restrict the amount of equipment that is available to developers in Ontario. Though there has been concern that development would be limited by supply shortages, it is now most likely that there will be sufficient supply to meet demand from 2011-2015.

- Of the 30+ module manufacturers ClearSky Advisors has been tracking, 17-24 are likely to produce DCR compliant modules in 2011
- Increasing volumes of module supply continue to become available (i.e. Recurrent and Celestica recently announced a joint venture to manufacture solar panels at the Celestica facility in Toronto)

¹ Note: All MW figures are in MW dc unless otherwise stated.

- Delayed utility-scale development will enable module supply to exceed demand by Q3, 2011
- Large inverter manufacturers with flexible capacity will be able to fully serve Ontario's FIT market from 2011-2015

Module and Inverter Manufacturers in Ontario				
	Facility in ON	Using 3 rd Party Manufacturer	Using ON Silicon	Total
Module Manufacturers	11-15	4-6	2-3	17-24
Inverter Manufacturers	7-11	6	NA	13-17

Market Instability

Without doubt, the foremost concerns of Ontario PV market participants are political and regulatory uncertainty. This is due to three main factors:

- continual changes and delays in Ontario's FIT program,
- a FIT program review scheduled for 2011,
- a provincial election slated for the fall of 2011.

All of this uncertainty has combined to make Ontario a challenging market in which to operate.

- Long-term planning is exceedingly difficult for any business participating in Ontario's FIT program
- A number of manufacturers have delayed investment in the province (either by entering the market cautiously and waiting for more stability before expanding or by avoiding the market altogether)
- Uncertainty means risk; this has made project financing more expensive and harder to come by

Methodology

The information for this report was gathered between December, 2010 and February, 2011. During this period, ClearSky advisors conducted in-depth interviews with over 65 key stakeholders and surveyed over 50 installers. Extensive secondary research was also undertaken to gain a comprehensive view of the Ontario PV market.

Our interview process included: module manufacturers representing 93% of expected supply in 2011, inverter manufacturers representing 91% of expected supply in 2011, and developers representing 87% of executed FIT contracts.

Our installer survey included: responses from 51 installers, of whom 47 completed the survey and 4 partially completed the survey. The installer survey has a margin of error of 10.7% nine times out of ten.

This Report

This report is part of ClearSky Advisors' *Ontario Market Access Service* and contains in-depth analysis of the Ontario PV market from 2011-2015. Topics covered in detail include: market drivers and restraints, demand, supply, installation volumes, market value, and pricing. Based on the key findings in the report, ClearSky Advisors also provides actionable recommendations for developers and manufacturers.

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About ClearSky Advisors

ClearSky Advisors is a research and advisory firm focused on renewable energy. We provide data, insight and advice that allow our clients to make timely decisions for their organizations. Through our continuous research activities, ClearSky Advisors serves executives within a wide range of stakeholder groups including government, industry and finance.

Founded by executives with extensive experience conducting and managing research on a worldwide basis, ClearSky Advisors delivers research in a brief and accessible format suitable for an audience that requires quick and easy access to mission critical information and insight. Our written research is complemented by direct access to analysts and in-depth actionable recommendations and advice.

ClearSky Advisors offers both off-the-shelf research services as well as custom engagements for clients with particular needs. The combination of in-depth expertise on solar markets and extensive research experience allows us to provide clients with valuable and timely insights and information in a cost-effective manner.

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