



Labour Force Trends and Issues in the Canadian Solar Industry

In late 2008, the Electricity Sector Council (ESC) in partnership with the Canadian Solar Industries Association (CanSIA) commissioned a labour force survey of the Canadian solar industry. The purpose of the survey was to identify the main labour force trends and issues in the solar industry over the next three years.

The Canadian solar industry consists of two main segments. The photovoltaic (PV) segment uses technology (usually a solar panel) to convert energy from the sun directly into electricity. The main PV applications today in Canada are in the off-grid, non-residential market, e.g., water pumping, navigational aids, roadside emergency telephones, etc. This is followed by the off-grid residential market, which includes powering of remote homes

and cottages, recreational vehicles, etc. Recently, there has been an increase in the on-grid distributed market for systems installed on homes and commercial buildings that are grid connected. The solar thermal (ST) segment uses technology for harnessing solar energy for thermal energy (heat). Typical ST applications include solar hot water heating, solar air heating and cooling, and solar pool heating.

While today solar energy represents less than one per cent of the Canadian energy mix, it is expected that by 2025, the PV segment alone could meet **10%** of Canada's electricity requirements.¹

A positive labour forecast

Out of the estimated **287** companies in the Canadian solar industry, **88** companies responded to the online survey, for an above-average response rate of **31%**. These **88** companies reported a total labour force of **1,524** full-time equivalents (FTEs) in 2008. This labour force is expected to grow to **3,069** FTEs by 2011 – a dramatic growth rate of **101%** in FTEs over the next three years.

This bullish prediction is significant in view of the fact that the survey was administered at a time when signs of the severe global economic downturn were already apparent. The positive outlook of solar companies may be due to the growing belief worldwide that environment-friendly green technologies will lead future economic growth.



¹ "The Potential for Solar Power in Canada," presentation by CanSIA at the CanSIA/NRCan PV Forum, February 12, 2008.

The job functions expected to experience the highest growth rates over the next three years include project management (**178%** growth), followed by installation (**146%**), sales (**120%**) and manufacturing (**107%**).

Labour shortages are inhibiting growth

As of late 2008, some **41%** of companies were experiencing labour shortages, primarily in installation (in **75%** of the companies experiencing shortages) followed by technical areas, systems design and integration, sales, project management and engineering. These shortages are expected to become more severe over the next three years. Of those companies experiencing or expecting shortages, **53%** considered the shortage to be critical to the growth of their companies over the next three years.

Solutions

Companies in the Canadian solar industry identified a large number of potential solutions that would help them achieve their optimistic growth targets. The solutions receiving the highest degree of support were the following:

- 1 Incorporate solar energy technologies and research in the technical and engineering curricula of colleges and universities.
- 2 Encourage apprenticeship programs in technical areas.
- 3 Provide a Canadian certification program for ST installers.
- 4 Provide a Canadian certification program for PV installers.

Together, the ESC and CanSIA plan to work with industry and stakeholders to develop policies and programs to ensure that the industry will be equipped with qualified and trained human resources to sustain its growth.

Download the complete 2008 Solar Industry Labour Force Survey Report online at www.brightfutures.ca or at www.cansia.ca.

