

Solar Incentives Compared

Canadian Programs Lag Behind U.S. and Europe

By David Oxtoby

Tax treatment of solar equipment and the level of government incentives will likely play a major role in the market breakthrough of solar power. Here are the four most common types of solar power incentives, and how Canada's programs stack up against those in the United States and Europe.

- **Investment Tax Credits (ITCs).** These credits are normally calculated based on a percentage of the initial cost of a system. In the U.S., the federal ITC provides a rebate of 30% of the cost of a solar power system; in Canada there is no ITC.
- **Production Tax Credits (PTCs).** These credits are normally based on a system's rated output, and are often offered by state governments or utilities. In New York, the state PTC refunds an average US\$4.50 per Watt of capacity, up to 50 kW (US\$225,000) per installation. This represents almost half of the average system cost. In Canada there is no PTC for photovoltaic systems.
- **Renewable Energy Certificates (RECs).** These are tradeable credits that can be sold to utilities or other load-serving entities that need them to comply with state-mandated renewable portfolio standard (RPS) programs. With an RPS program, a state or province requires that a certain portion of electricity generation come from renewable sources by a certain date (e.g. 12% by 2012). 25 U.S. states now have mandatory RPS programs and 11 of them include minimum "set-asides" for solar power.

In New Jersey, for example, the state target for solar power generation is 2.12% of all power generation by the year 2021. The "non-compliance" penalty for utilities failing to meet the 2009 RPS solar target is set at a whopping 71 cents for every kWh they are short.

Governments of four provinces – BC, Alberta, Ontario and Nova Scotia – have at one time or another announced RPS programs, but the targets have been largely voluntary. So far no provincial government has taken the step of establishing penalties for non-compliance, or systems for creating and trading RECs.

- **Feed-In Tariffs (FITs).** These are special electricity tariffs, under which a government agency or utility commits to buy the output of solar power systems at predetermined prices for a number of years. In Germany, the growth of solar has largely been driven by a feed-in tariff, with the current rate being set at 57.4 Euro cents (about 80 Canadian cents) per kWh for electricity generated by PV systems on buildings. Ontario has caught the attention of the solar industry by being the first North American jurisdiction with a feed-in tariff, but the rate offered is much lower, at 42 cents per kWh.
- **Sales Tax Exemptions.** In many foreign jurisdictions, solar power equipment and installation costs are exempt from retail sales taxes, which can add up to 8% to the cost of a project and are not always recoverable the way the Canadian federal GST is. Exemptions vary from province to province, but in Ontario there is no exemption for PST on commercial or industrial solar installations – only for residential ones. **PMR**

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