

RESOURCES: ALTERNATIVE ENERGY SOURCES

Here comes the sun: Ontario pushing solar power

Province's commitment to pay premium prices attracts bigger players to fledgling sector

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Ontario's promise to pay premium prices for electricity generated from the sun has spurred private developers to launch a spate of projects that could make the province one of the world's leading solar power producers.

In the past few weeks two consortiums have announced plans for several large solar farms, where hundreds of solar panels, spread out over acres of land, will generate power to be fed into the province's electrical grid.

Industry proponents say building these projects will boost Canada's expertise in this emerging technology, create jobs and generate clean power that will help reduce greenhouse gases.

Still, solar power will likely never make up more than a tiny proportion of overall energy production in Canada. Even if all the planned projects in Ontario are built, the total solar power production will be only about 100 megawatts, enough to supply about 15,000 homes. By contrast, there is currently about 415 MW of wind power in the province and 1,500 MW across the country.

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The recent action in the solar sector was prompted by Ontario's decision to give a boost to the sector by paying 42 cents a kilowatt-hour for solar-generated electricity, roughly seven times the price for conventional power, and almost four times what the province pays for renewable electricity from wind or biomass projects.

Until recently, most solar power was generated "off-grid" by people who could not, or didn't want to, connect to the main power system. Now that Ontario will pay premium prices under its "standard offer contract" there is incentive to connect to the grid, and sell excess power to the province.

Many of the contracts signed so far are with individuals or small businesses that will sell a few kilowatts to the Ontario Power Authority. But the price is high enough that it has prompted some firms to look at much bigger projects designed specifically to generate substantial amounts of power.

Ontario's decision to pay a premium price "has tipped the balance so that [large] projects make economic or financial sense," said Peter Carrie, vice-president of OptiSolar Farms Canada Inc., which recently signed contracts to feed solar power to the Ontario grid from several projects in southwestern Ontario. "The climate [for developing solar projects] is better than it's ever been."

OptiSolar Canada - a subsidiary of California's **OptiSolar Inc.** - announced in late April that it will build a solar farm capable of producing 40 megawatts of power on a large piece of land near Sarnia, Ont., starting next year. The project, one of the world's biggest solar installations, will have hundreds of thousands of solar panels.

Two weeks ago OptiSolar unveiled another 20 MW project near Petrolia, Ont., and in early June will tell Tilbury, Ont., residents about an additional 20 MW project planned nearby.

Another group, a joint venture of Toronto wind power player **SkyPower Corp.** and U.S. solar power firm **SunEdison LLC**, has received a provincial contract to generate 9.1 MW from a solar project in Norfolk County along Lake Erie. It will soon announce a second project of about the same size in a different part of the province.

SkyPower president Kerry Adler said that while the 42 cent Ontario price for solar may seem like an enormous premium over what the province pays for other forms of power, the economics of developing solar farms are still "borderline" because they are expensive to build and the sun only shines on clear days.

But he praised the government for "doing the right thing [by] trying to leverage every single natural resource in an effort to curb harmful emissions."

At the same time, there will be "immense" economic benefits by encouraging the industry, Mr. Adler said. "You're going to create a skill set that'll be in demand around the world."

By paying a premium for solar power, Ontario is following other jurisdictions such as Germany and Japan, which have become the world leaders in solar installations though similar subsidies.

Germany has about 1,000 MW of solar power and Japan about 300 MW.

What's surprising to some, is that Canada actually has better weather conditions for generating solar power than either of those two countries, said Tom Astle, a National Bank Financial analyst who follows renewable energy technology. "Most of Canada is fairly good in the overall scheme of things," he said. "We have more sunny days [than either Germany or Japan]."

It also helps that peak power demand in Canada occurs when air conditioning is turned up full blast on hot summer days, the same time the sun is blazing down.

Another key factor prompting activity in the industry is that the cost of solar panel technology is falling rapidly, Mr. Astle said. While no other province has yet to match Ontario's high price offer, others are sure to follow, he said.

Nova Scotia has issued a "request for proposal" for a wide range of renewable power projects, and SkyPower will bid for a solar project under that program if the province is willing to pay a premium price, Mr. Adler said.

NOT IN MY BACKYARD

Solar farms have raised fewer local concerns than wind power projects, since they don't involve the construction of huge turbines that tower over the landscape.

There are thousands of sun-gathering panels in a typical solar farm, but each one is only a few feet off the ground.

"Solar does not intrude into the skyline, and essentially it's a silent technology," said Peter Carrie, vice-president of OptiSolar Farms Canada. "Living beside a solar farm is pretty much the same as living beside a greenhouse."

But there are still those who don't want a solar farm right on their doorstep. In Norfolk County in southwestern Ontario, an 80-acre, 9.1-megawatt project planned by SkyPower Corp. and SunEdison Canada just barely received municipal council approval last week in a slim 4 to 3 vote.

John Wells, a Norfolk councillor who represents the ward where the project will be built, said he voted against it due to concerns of constituents who live nearby.

They didn't like the eight-foot fence that will surround the project, an intrusion into the "country-like atmosphere" of the region, he said. And it is removing from production prime agricultural land that only last year grew melons, soy beans and corn, Mr. Wells said.

While he personally feels there are "many positive things" about a solar farm, Mr. Wells said he had to express the concerns of his constituents through his vote.

Solar projects are easier to stick handle through the approvals process in Ontario than wind farms, mainly because they don't require an environmental assessment. Current law allows solar projects on land zoned for agricultural or industrial, but the municipality's approval is needed.

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