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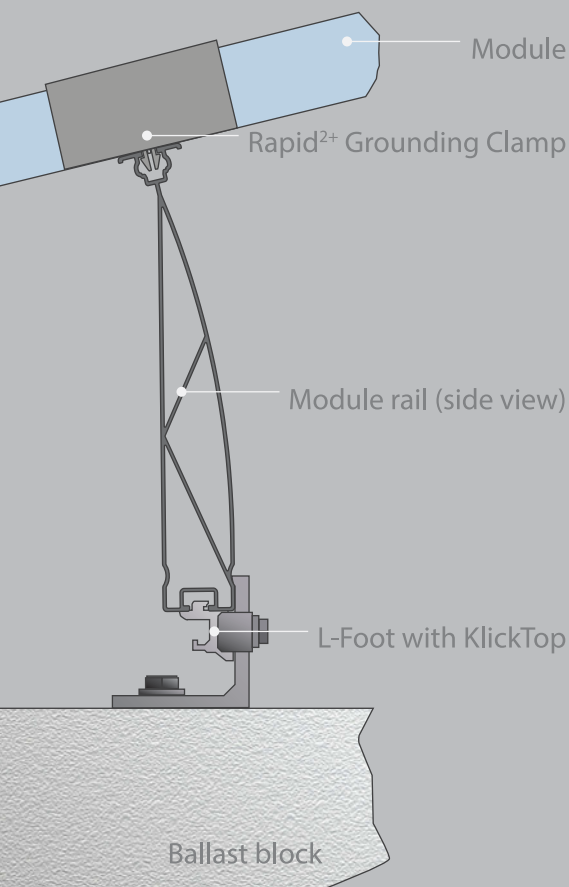
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»» VISION

CanSIA actively represents the Canadian solar industry by promoting the unique economic, environmental and technology benefits of solar energy in Canada. Our goal is to be the source of trustworthy information about solar energy and its growing importance to Canadian energy consumers.

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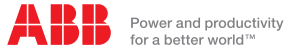
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ONTARIO

PUTS CANADA IN THE GAME

TEAMWORK NEEDED TO WIN

By Drew McKibben

CANADA HAS EARNED AN IMPORTANT PLACE

in the escalating global solar energy market, but this position is built on a framework of Ontario policy, prompting concerns that a single province cannot sustain the national industry's competitive advantage.

Canada has passed 1 GW of installed solar energy capacity and is on course to reach 2 GW in 2015. These strides are aligned with the swift pace of a worldwide solar energy industry.

"At this moment the Canadian manufacturing industry, and I'm specifically referring to solar modules rather than inverters or other components, is larger than the entire European industry, is larger than the US, and is three times larger than Mexico," says **Paolo Maccario, Chief Operating Officer of Silfab Ontario Inc.**

Silfab, the Canadian subsidiary of an Italian company, opened a fully automated Mississauga photovoltaic-module manufacturing plant in 2011. It is one of many start-ups providing PV products and services in Ontario's thriving solar energy sector.

Five years ago, Maccario had not imagined he would be where he is today. At that time, he explains, there were heavyweight competitors in the solar arena, "and the winners were clearly Chinese."

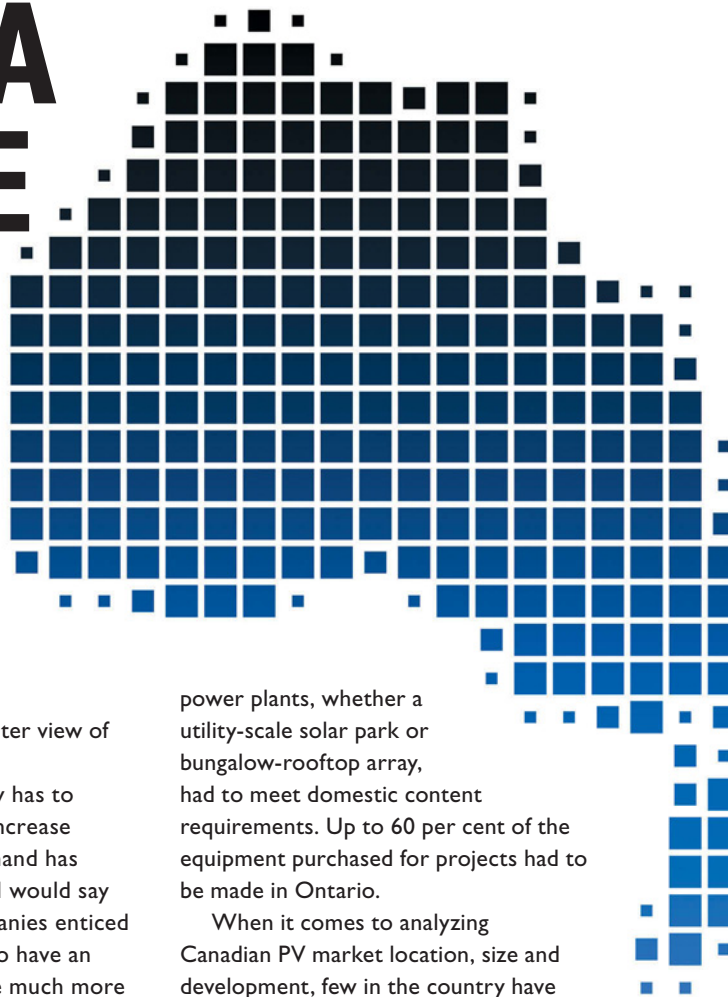
Maccario now has a brighter view of the world.

"At this point, everybody has to invest again. They need to increase capacity because finally demand has caught up with supply. And I would say most of the Canadian companies enticed into Ontario three years ago have an advantage in the fact they're much more automated than corresponding Chinese companies, or Mexico or the rest of the world."

Indeed, these are bright days for the Canadian industry. In 2008, the country had only 33 MW of PV, of which 85 per cent was off-grid. In 2009, Ontario passed the Green Energy Act, which led to feed-in tariffs for renewable electricity generation, available through the FIT and MicroFIT programs. To qualify,

power plants, whether a utility-scale solar park or bungalow-rooftop array, had to meet domestic content requirements. Up to 60 per cent of the equipment purchased for projects had to be made in Ontario.

When it comes to analyzing Canadian PV market location, size and development, few in the country have a better perspective than **Natural Resources Canada's (NRCan's) Yves Poissant, the federal government's Photovoltaic Technology Specialist.** NRCan has conducted an annual survey of the Canadian PV industry for 15 years, reporting key statistics such as installed generation capacity, location and size of plants, and number of jobs and manufacturers. The data clearly shows, says Poissant, Ontario's



2009 Green Energy Act started “the solar revolution.”

It took between 2009 and 2013, “five years of installations,” he stresses, to pass the one-gigawatt milestone. “But we might actually install another gigawatt in 12 months or a little more.”

The 2013 survey data is not yet published. The 2012 report, however, confirms Canada had 766 MW of grid-connected PV. At that time, if Ontario policymakers hoped to see other provinces on the Canadian solar team, they would have strained their eyes to see Alberta far, far behind, ranking second with an installed PV capacity of 2 MW.

Today, Ontario still has 99 per cent of Canada’s installed PV capacity and a corresponding share of investment from the country’s solar industry, which has eagerly supported the province’s ambition. This provincial concentration, says **CanSIA President and CEO John Gorman**, is not what the industry wants.

“Imagine 2,000 MW installed by the end of next summer and 6 MW is outside of Ontario,” says Gorman. Canada’s top-10 position, in terms of PV capacity, he adds, is a “toehold” in an important market of worldwide significance.

“Ontario’s program has given us a respectable position,” he says. “The challenge is we don’t have a national strategy around developing and maintaining a national solar industry.”

Energy affairs steeped in policy

Gaëtan Masson is Head of Business Intelligence at the European Photovoltaic Industry Association (EPIA), and is the author of EPIA’s *Global Market Outlook for Photovoltaics 2013–2017*. On the phone from his Belgium office, he confirms Canada has made a place for itself on the world PV map. From an international perspective, he also confirms it is “remarkable” this appears to have been achieved within the boundaries of one province.

“I would say the development of PV in Canada shows, and this is something I’m saying very often, that PV is not only a technology for extremely sunny countries but is a technology for almost all countries in the world providing certain framework conditions,” Masson says.

It seems, he continues, people too often forget everything that relates to energy is and will continue to be policy driven. Energy is linked to the environment; it is tied to the economy as a critical factor in the cost of doing business; it is part of the welfare of the populace, and questions of energy security are increasingly important everywhere. For all these reasons, “Policymakers will always keep an eye on energy market developments,” says Masson.

“Canada is an interesting attempt to develop in parallel the market and the industry,” he says. “It shows something extremely important. We’re not only developing renewable energy because we want a safer electricity mix; the renewable industry is also part of transforming the economy, part of a greener economy we hope to see in the coming decade. From that point of view, developing the PV industry in parallel with the PV market makes sense. These things should coexist.”

The World Trade Organization (WTO), which deals with the global rules of trade between nations, also found Ontario PV policy interesting. In 2013, it declared the domestic content rules discriminated against foreign suppliers. Consequently, the province was forced to begin scaling down the required percentage of Ontario content for renewable projects, and in December proposed an amendment to the Green Energy Act. The new legislation will surely pass in 2014, and PV power producers will be free to source all their equipment from anywhere in the world.

Masson stresses he is not judging Ontario’s policy or the WTO ruling. “I’m not commenting on whether this is good or bad, but if governments are interested they can look at what happened and identify for themselves — even if it was not probably the best way to do it — whether or not it was the right thing to do.”

Silfab’s Maccario, who also chairs CanSIA’s manufacturing committee, says the impending Ontario market changes are part of a “double whammy.” In addition to eliminating domestic content, he explains, there is simply less new generation required in Ontario. In 2015, the pace of Ontario’s PV installations will begin to slow.

“The reality is the domestic content has been removed too quickly. It will be very difficult for many of the local players here to replace local demand with foreign demand,” says Maccario. “The changes could’ve been made in a more progressive way, allowing for a softer landing.”

Maccario believes some Ontario manufacturers will move from Canada to a location with greater demand. He expects to stay, however, because Silfab already has European-based manufacturing, is among Canadian manufacturers noted for superior-quality products and is prepared to fight for a share of the North American market. One thing is certain, there will be global demand. EPIA’s market outlook conservatively forecasts 70 per cent growth in worldwide PV generation before 2018.

For companies up to the challenge of exporting Canadian solar technology, it will be a struggle to get beyond the industry’s relatively recent creation.

“We have huge difficulties with name recognition and marketing and business development,” says Maccario.

Solantero Semiconductor CEO Antoine Paquin seems to be in the same boat as Maccario. Solantro is a 2009 Ontario-based start-up specializing in power conversion technology. Its high-tech, smart-grid, electronic products facilitate — indeed, may revolutionize — the connectivity of generation to the electricity distribution system.

One of the ways Solantro differs from Silfab is its ability to immediately tap into export markets. Paquin says at least 50 per cent of his business is related to the solar industry, and the Canadian market accounts for only 10 per cent of sales.

“Being in Canada, we have to be more innovative,” says Paquin. “Canada is not a big market for what we do. It’s a very small market. We have to go global, and to compete globally you have to out-innovate the competition.”

Even with its innovative product and global footprint, though, Solantro faces the same challenge as Silfab, building a customer base.

“We don’t have competition globally yet, but we still have to make the case to customers worldwide that now is the time to move to this. It’s as much work to commercialize a product as it is to develop a product.”

Gorman thinks product differentiation may be an important aspect of the Canadian solar industry’s international

competitiveness. Companies like Solantro, he says, are a good example. He believes Canadians are positioned to excel at solar innovation.

“I think the truly exciting and new frontier, where Canada is going to be able to play an exciting role, is going to be in research and development around the next generation of solar technologies, the smart grid technologies enabling the management of solar electricity in very efficient ways.”

Ontario is not a national market

Meanwhile, NRCan’s Poissant says time will tell if the carefully built supply chain in Ontario begins to break apart as the Canadian solar industry moves to greener pastures. If they don’t move, he believes exporting to markets like the United States, “and other countries with PV incentive programs, will be a key to the survival of the industry.”

Helping support that evolution, says Poissant, is NRCan’s aim.

“Our mandate is to facilitate the development and deployment of PV Technology in Canada, but also to help our industry compete globally.”

This is being done, says Poissant, not only by reporting on the state of the industry, which provides facts for provincial policy development, but by helping it comply with international equipment standards. It also does technical analytics, like electricity system integration of intermittent generation, and PV system performance analysis.


“It’s vital for Canada to keep all the ingredients in place,” he says. “In order for PV to burgeon we need all the ingredients, so the chemistry will take place. We need demand. We need manufacturing capacity. We need innovation to be able to maintain the competitive edge of the Canadian industry.”

In every conversation relating to the Canadian solar industry, though, there is an elephant in the room. This creature is the size of nine provinces and the federal government. Across the country, among Canadian policymakers, there has not been sufficient interest in solar energy to create a market outside Ontario. The globally competitive Canadian solar industry is without a Canadian market.

“How can you develop and compete in an industry if you have no market at home?” queries Masson.

Europe’s PV business guru suggests, even though solar energy will be unevenly economic across the country, it may be worthwhile for Canada to have a broader PV market, through policy, in order to develop the industry and compete internationally.

“If you look in recent years at the speed at which PV has developed, and the expectations that many analysts have



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with regard to market development in the next five to 10 years, it would be a real pity for Canada to lose its incredible opportunity to be one of the leading countries in this sector," says Masson. "One thing is for sure, it will be extremely difficult to enter the global market when it is mature."

Gorman believes this type of international input is important. Sharing information with an experienced community of renewable energy stakeholders is another advantage of being in the game, he says. CanSIA, for example, recently joined the International Energy Agency's Photovoltaic Power System Executive Committee, the IEA PVPS. With 28 members drawn from countries and organizations leading in the field of photovoltaics, the committee has a list of tasks tackling every challenge of PV development.

"It's our avenue to influence the recommendations of the IEA, and it's our avenue to promote the strength of the Canadian solar industry to an international community," says Gorman. "And it's our opportunity to have a say about recommendations coming forward around research and development and business models supporting solar."

Gorman says examples from the European Union and the United States, such as a federal tax incentive program, indicate public policy is required for a national renewable energy industry. This would, he says, "create context" for provincial and municipal initiatives.

CanSIA advances policy recommendations

"We have all our eggs in one basket right now. We need a federal strategy that supports solar and takes advantage of what has been created in Ontario," says Gorman.

To this end, CanSIA recently formed a Federal Caucus to consolidate the association's experience. **Lawyer Tom Timmins is a renewable energy specialist at Gowlings.** He also chairs CanSIA's Federal Caucus. He says this sub-committee of CanSIA's board is working on a strategy to present specific recommendations to the federal government, which would help it encourage the growth of both the

solar thermal and PV markets in Canada. Thus far, says Timmins, there has been a strong focus on solar tax incentives, export growth opportunities and aboriginal initiatives.

"Things will be very busy for the next couple of years," says Timmins, "but the question is what's next? Canada has a story now. We have a gigantic industry, a sizable industry that's going to wilt if we don't reach the world market. We think there's a role for the federal government to play."

On the solar thermal side of the industry, CanSIA has already produced a position paper outlining broad policy recommendations for all levels of Canadian government.

Robert Waters is Canadian Solar Product Manager for Viessmann Manufacturing, an international group of companies based in Germany, specializing in heating systems. The company designs and builds flat plate and evacuated tube solar collectors for water heating.



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– Natural Resources Canada’s (NRCan’s) Yves Poissant, the federal government’s Photovoltaic Technology Specialist

Waters chairs CanSIA’s Solar Thermal Caucus and says the position of the Canadian thermal industry is directly connected to “energy prices and the political will to look at technologies that will reduce greenhouse gas emissions.”

Waters says the market for solar air-heating systems, which are distinctly Canadian and internationally successful, is showing strong signs of life.

“They were developed here in Canada and are now being sold around the world. That, to me, is very important and shows the interconnection of products developed here and sold around the world. It shows the importance of an international connection.”

The Canadian solar water-heating industry, on the other hand, is in trouble. The problem is a decline in the price of the incumbent fuel used for heating, natural gas, and a weakening of public policies which, not that long ago, encouraged fuel efficiency and a reduction in carbon emissions through solar heating.

“In 2010 our sales peaked,” says Waters. “Things were looking great. Sales had grown dramatically over the previous three or four years. We were seeing a huge upward trend. The wheels came off when the federal government changed its EcoEnergy program.”

Waters says there are a few domestic manufacturers of solar water heating

systems “hanging on” to the Canadian market, but foreign manufacturers have lost interest in the country. In the context of the global solar water-heating industry, Canada is losing its edge.

“Over the last 10 years, a lot of people jumped into solar thermal. We have a lot of engineers that learned how to design systems, and dealers, and distributors that figured out how to sell solar. It’s all still there, but it’s gone dormant. If some initiative came back the business could rebound fairly quickly, but the longer this goes on the more that knowledge and experience will fade away.” ●

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PV

A GROWING AND PIVOTAL PART OF ONTARIO SYSTEM

By Drew McKibben

WITH SOLAR PV TAKING an increasingly prominent role in Ontario's electricity system, a new CanSIA-led task force is looking to lay the foundation for future growth and unlock the full capability of the technology.

The province's installed PV capacity recently surpassed 1 GW, enough to place Canada among the top 20 solar countries worldwide, and is expected to double to 2 GW within the next 18 months.

"There's a lot of activity going on right now in the Ontario solar PV sector, and it's a testament to the robust industry we've established here in a short period of time," says **CanSIA President and CEO John Gorman**.

The province's **Independent Electric System Operator (IESO)** is already seeing the difference solar is making, says **CEO Bruce Campbell**. There is less demand on the high-voltage transmission network as distribution-connected solar helps meet local needs and eases the strain of summer peaks. PV also has an impact on the morning ramp, a key period when power use climbs as people get up and start their day.

"We can tell if it's a sunny or cloudy day just by looking at the demand profile," Campbell told delegates at CanSIA's December annual conference.

The growth of solar and other variable sources of generation such as wind has brought a significant change in the operating characteristics of Ontario's generating fleet, says Campbell. Even as the IESO puts new tools in place to manage that change, he adds, it is looking ahead to developments that will transform the electricity sector in even more fundamental ways.

Cheaper solar power, cheaper energy storage, more internet-connected devices, low-voltage DC power networks and other technology advances are increasingly empowering the consumer and driving the evolution of the grid from a highly-centralized structure where electricity flows in one direction to a more distributed, interactive system with resilience to more variable and bi-directional power flow.

"At the IESO, we believe the role and opportunities for solar generation will expand dramatically in this new world," Campbell told CanSIA delegates.

Ontario's new Long-Term Energy Plan (LTEP), released last December, recognizes the growing importance of solar. The province says it will buy another 280 MW of PV in 2014 and 2015 using a new competitive process for large-scale projects, and pledges to consider expanded targets for solar and other renewables through annual reviews of supply and demand. The new purchases come on top of the government's earlier commitment making 900 MW of new capacity available between 2013 and 2018 for FIT and MicroFIT projects. Starting in 2014, FIT will have an annual procurement target of 150 MW, with a 50 MW annual target for MicroFIT.

The new LTEP targets provide much-needed stability and predictability to the industry, says Gorman. "That is the single most important thing you can do for any industry, to give it that visibility into what the medium-term looks like," he says.

At the same time, though, the plan falls short of what the industry had asked for during LTEP consultations. CanSIA wants to see solar supply five per cent of Ontario's electricity needs by 2025, up

from about one per cent today. Under the LTEP, solar will see its share of the supply mix increase to three per cent by 2025.

The LTEP targets reflect the fact that Ontario is going through a period where it does not need a lot of additional generation, concedes Gorman. But he also argues that maximizing the role of PV in the system brings benefits beyond just the electricity generated. That value will increase as technology advances, especially in the area of semiconductors and smart inverters, to allow for higher energy yield from individual panels and provide greater network control to system operators.

"PV helps stabilize the grid, it creates the ability to be able to control the flow and the management of electricity much better. We think Ontario needs more of that at this particular time," Gorman says.

"Increased targets for solar also give flexibility to the planners when it comes to much bigger investments. We can avoid making major investments in new centralized generation or new transmission lines, which is especially important in an environment where we're uncertain about where electricity demand is going to go. You can put solar where it's needed, it can be rolled out quickly and delivers during peak hours."

Despite its conservative targets, Gorman sees the LTEP as an important bridge to the day when PV reaches grid parity in Ontario. "When that happens, and our research projects it will be in about four years, you're in a market environment where it makes just as much sense, if not more sense, to use solar as any other type of technology on the market. Then I think it's almost impossible to predict what's going to happen."

CanSIA is laying the groundwork for that growth by creating the Solar PV Distributed Generation Task Force, which includes representatives from government, industry and local distribution companies.

The aim is to drive down the soft costs associated with application, permitting and grid connection processes so they keep pace proportionally with declining hard-equipment costs. Additionally, the technical issues associated with the higher penetration of solar on the grid need to be addressed, says **Nigel Etherington, Principal of the consulting firm Planet & Company** and task force co-chair. The focus, he says, will be on how best practices from other jurisdictions can be replicated to deploy PV more efficiently and effectively in the Ontario market.



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“We think there are ways of streamlining these processes and of using different thinking in designing codes and standards that capture the capabilities that are inherent in this new technology,” he says.

“If we get it right, I think there is a huge upside.”

Ivano Labricciosa, Executive Vice-President of Business Development for Toronto Hydro, sees the task force as an avenue for local distribution companies to carve a larger role in areas that include managing the permitting and connection process, aggregating individual PV resources and offering them into the market, planning and implementing the smart grid, and providing maintenance support to customers with PV systems.

“In my mind utilities have to be progressive,” he says. “We were disappointed we didn’t take a bigger part in this play way back when people were developing policies around what the utility role should be. We saw it as being a leader in this space because it was distributed generation connected to the distribution system.”

CanSIA is also working with the government and industry to examine how solar thermal technology fits in Ontario’s energy mix, Gorman says. Although the LTEP did not include the 15 MW per year target recommended by CanSIA, it did recognize the need to explore its potential. “That’s the first time they’ve done that,” says Gorman. “We’re in the process of having meetings with government to discuss what the benefits are, how the technology works, and how it can help the system.” ●

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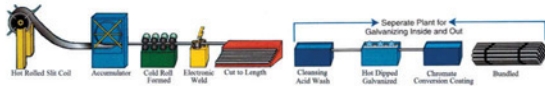
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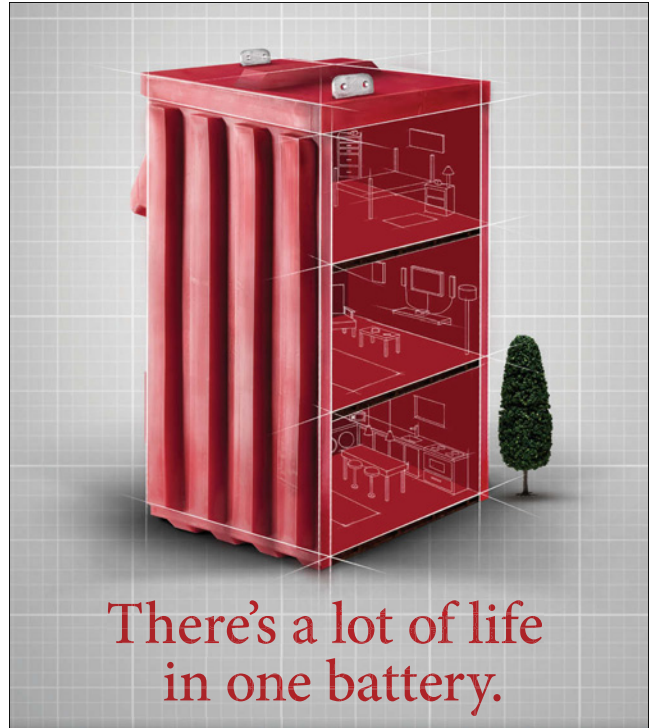
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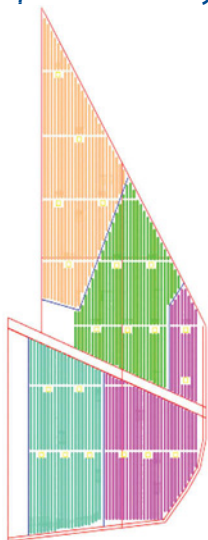
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CanSIA RECOMMENDS ALBERTA STRATEGY

By Drew McKibben



CanSIA HAS WRITTEN AND DELIVERED

policy recommendations to the Alberta government, advising how to tap into the province's solar energy reserves.

The document, *From Proven Reserve to Developed Resource*, presents the carefully considered thoughts of solar industry experts as well as third-party consultants knowledgeable with the province's deregulated electricity market.

It identifies policy options that would deliver a fair price for solar electricity, supported by existing mechanisms for electricity procurement and emissions reductions, says the chair of CanSIA's Alberta working group, **Brent Harris, Eguana Technologies Vice-President of Product Development.**

The guiding principal of CanSIA's proposal, says Harris, is the aim to install solar energy capacity to meet 1.5 per cent of Alberta's electricity demand by 2022. This would, explains the document, lead to solar playing a meaningful role in the province's electricity sector, with 1 GW of new generation, 625,000 tonnes of displaced carbon emissions, \$3.2 billion in private investment and 24,000 direct jobs.

CanSIA's recommendations are intended to provide input into the government's ongoing work to implement alternative and renewable energy policy, an objective launched in 2011. This year, the province renewed its commitment in a March throne speech. Alberta,

said **Lieutenant Governor Donald Ethell**, "will introduce an alternative and renewable energy framework that empowers consumers to exercise choice within the market-based electricity system."

These words go to the heart of why introducing photovoltaic generation in Alberta is an ongoing challenge. The province's electricity market structure includes a competitive hourly spot market through which all the province's electricity must be exchanged. While customer choice is important, the unfettered, free-market supply of energy from private sector, independent power producers (IPPs) is also a critical factor.

Alberta's 14,000-MW generation mix is about 85 per cent thermal, evenly split between coal and natural gas. The government released energy and climate change strategies in 2008, outlining CO₂ reduction targets and promising to consider the development of renewables, but has fallen short on both. The throne speech promises to change that.

"Your government will also work to diversify Alberta's own domestic energy mix," Ethell promised Albertans.

During the design of CanSIA's recommendations, and through the lengthy period Alberta has been studying the challenge of implementing clean energy policy, the association has been in contact with the government, which recently created an Associate Ministry of Electricity and Renewable Energy.

"We shared the draft with the province, and the feedback was positive," Harris says. "The approach is in line with the framework they have in mind. We haven't got a lot of engagement on the details, but so far it's been very positive."

CanSIA's proposal lays out the means by which rooftop PV and utility-scale solar parks can be installed. For distributed rooftop installations, both residential and commercial, CanSIA sees Alberta's micro-generation regulation, a successful vehicle for distributed solar since 2008, as a way to further motivate the market.

The regulation allows grid-connected power producers up to 1 MW — with installed capacity not exceeding anticipated load requirements — to receive financial credit with their electricity retailer when exporting power to the distribution system. CanSIA is proposing a net-billing arrangement, not unlike the existing program, that will deliver credit to PV generators for CO₂ offsets in the province's carbon-heavy generation mix, as well as market value for electricity in the hours of peak demand.

"It's really about recognition for value," says Harris. "Under the micro-generation regulation, today, it's exactly the same rate as that paid for retail electricity. We're asking for some recognition that the solar energy delivered to the grid actually has higher value than what the retail rate is."

CanSIA recommends a rate starting at 15¢/kWh funded by the Alberta

Balancing Pool, which manages the proceeds from the auction that put previously regulated generation into the hands of wholesale electricity market participants. This credit payment is designed to emulate the true value of PV electricity based on its generation profile and the fluctuating price of electricity in the hourly market.

In addition, to deliver the carbon-offset value, residential PV would receive a supplementary credit of 10¢/kWh and non-residential generators 15¢/kWh. Both could be funded, says CanSIA, by the Climate Change and Emissions Management Fund (CCEMF), a carbon emissions compliance mechanism that helps deliver on the goals of Alberta's climate change strategy.

All these credit mechanisms, advises CanSIA, should be contractually offered to PV generators on a 15-year term.

This is where CanSIA's proposal may begin to cut against the grain in free-market Alberta.

John Rilett is Enmax Energy's Director of Distributed Generation.

Enmax is Alberta's largest electricity retailer and has a PV program with 350 participants, each grid connected through the micro-generation regulation with an average system size of 3 kW. It is also invested in 1,700 MW of generation, of which 11 per cent is renewable through utility-scale wind. Rilett is a member of the CanSIA board and says a policy-implemented contract for the delivery of electricity will be a "big step" in Alberta.

"The market does not provide that to anybody, whether you're building a big generation facility or you're a micro generator, there is not fifteen years of price certainty for anyone in our market," says Rilett.

Rilett does not say he is opposed to any aspect of CanSIA's net-metering proposal. He asks, rather, if Albertans are energy efficient and supplying carbon-free generation during the hours of peak demand, should they be rewarded for that?

"Ultimately, those are questions the government needs to answer and decide if it's something it wants to do. Undoubtedly, that would support micro generators, which would be nice. That would be a good thing."

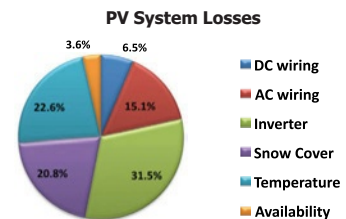
Crediting rooftop PV, though, will not accomplish CanSIA's 2022 1-GW target. The association expects half of this capacity will come from utility-scale solar farms. To encourage this portion of the market, CanSIA recommends an interim, CCEMF-funded pilot program aimed at ground-mounted utility-scale PV projects, "to give rise to 150 MW build capacity

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and overcome regulatory barriers before long-term policy is finalized.”

Depending on how the government decrees 150 MW of PV, this too will be a big step for the Alberta electricity market, says Rilett, who points out participants have invested in, developed and run their businesses for more than a decade based on an understanding of existing rules and regulations.

“How they go about increasing renewables is going to be a very interesting discussion,” he says. Speaking on behalf of Enmax, Rilett would like it to happen on a competitive basis, “where those building the projects get to decide what is the best technology, what is the best location, and what is the most competitive way to go forward.”

Harris says he is aware IPPs might view the pilot as market intervention. It is important, though, he says, Alberta follow through on its clean energy objectives now. The pilot, he explains, will provide essential experience with PV generation, permitting and regulation. It will streamline utility-scale installations, he says, and drive down the cost of subsequent projects.

“That’s what we want to demonstrate here, and use this interim pilot program to get up the learning curve for the industry in Alberta,” Harris says.

CanSIA has an ongoing dialogue with the Alberta government, which is unable to comment on the implementation schedule of the alternative and renewable energy framework.

“We don’t have any new dates on this. We’re certainly hoping that the process is underway by the time of CanSIA’s Solar West Conference in the fall.” ●



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FOCUS ON THE FUTURE

CanSIA, KPMG PARTNER TO CREATE SOLAR PV INDUSTRY ROADMAP 2020

By Nick Gustav

THE EARLY 20TH-CENTURY

French writer Antoine de Saint-Exupery famously said that a goal without a plan is just a wish. For CanSIA, simply wishing for Canada's rapidly growing solar industry to continue its upward trajectory isn't enough. The industry and the association need a plan.

Toward that end, CanSIA is partnering with KPMG, a global company that provides audit, tax and advisory services and operates 34 locations across Canada, to develop the Solar PV Industry Roadmap 2020. The document, which KPMG will present at the Solar Canada 2014 national conference Dec. 8-9 in Toronto, will put forth a vision for what the solar PV industry will look like in 2020 and identify any roadblocks that could prevent the industry from reaching its full potential, said **Wesley Johnston, CanSIA Vice President.**

"We're putting together a vision for the industry and are looking at the roadmap to achieve that vision," Johnston said. "The roadmap will provide CanSIA with a communications tool that we can share with government stakeholders — federal, provincial and municipal — to show them where we see the industry going, how we see it growing, how that can benefit them, and how they can play a part in the industry and help us move along that path."

Johnston said that upon unveiling the document, CanSIA will issue a

press release and make association executives available for interviews with national and local media outlets to share the plan and bring more attention to the solar PV industry. The document will also be made available on CanSIA's website.

Georges Arbache, KPMG's Vice President of global infrastructure advisory and its Canadian lead for renewable energy, said his company is working to develop a white paper that will assess the current state of Canada's solar PV industry. Beginning in April, CanSIA and KPMG will begin consultations with stakeholders from various segments of the industry and from government entities to get their perspective on the industry's strengths, market barriers and future prospects.

The consultations will take the form of e-mail correspondence, conference calls, group workshops and one-on-one interviews. The first workshop is scheduled for the Solar Ontario 2014 regional conference May 7-8 in Ottawa.

Johnston and Arbache said KPMG is a good partner for CanSIA because it is a reputable company with a presence in more than 150 countries, giving it insight into global trends in the industry and the international marketplace. Among the areas of focus will be Canada's solar PV manufacturing, research and innovation efforts and how the country can continue to grow its share of the global industry.

"We're going to leverage our global resources to get a better understanding of what's happening in key global markets where there's been a lot of growth in the solar industry," Arbache said. "That really involves talking with our colleagues who are on the ground in those countries. The roadmap is not just going to be a bunch of facts and figures. It's going to incorporate actual consultations with people who are connected to what's happening in the market."

The roadmap will also examine how to increase the adoption of solar PV technology across Canada, including provinces that have been slower to embrace it.

"Ontario is by far the leading province in Canada when it comes to solar," Johnston said. "We want to have that success in Ontario replicated throughout Canada, so the document will help us achieve that goal while also bringing solar PV to the attention of the federal government as well."

Johnston said the roadmap will allow CanSIA to identify the most important objectives to members and other industry stakeholders, giving the association a clear set of priorities moving forward.

"It will provide us with our mandate for the next five years," Johnston said. "What does the industry want, and how can we as the industry association help it get there? The roadmap will give us as an organization our marching orders." ●

THEY'RE REALLY SOMETHING ELSE

THE NEWLY ASSEMBLED 14-MEMBER Emerging Leaders for Solar Energy (ELSE) board have blown out the candle on their one-year anniversary cake and are ready to sweat off the calories.

The professional development and industry advocacy group for young solar industry professionals and students 30 years of age and under has some ambitious goals for 2014. From installing solar PV or solar thermal on a historic Parliament Hill residence, to grassroots advocacy on university and college campuses, professional development events and social media outreach, ELSE wants to put solar in a positive light for Canadians.

"We have two objectives," said co-chair **Lia Van Baalen, Marketing Assistant at inverter manufacturer Fronius Canada**. "The first is that we want to help build public support for the industry that has nurtured us, and because we believe solar has a huge role to play in the future of the energy system."

"And the second," continued co-chair **Jonathan Frank, Business Development Manager for Toronto-based SunEdison**, "is to provide professional development resources and opportunities to our members who represent a huge pool of talent that needs to be encouraged and developed to ensure the ongoing success of the industry, and some would argue the planet, as well."

CanSIA initially launched ELSE in 2012 at Solar Canada as a youth advisory panel and ELSE was officially formed with a volunteer board in March of 2013. Both Frank and Van Baalen say that support and interest from prospective members has been overwhelming. And signs of the group's rapid growth are apparent everywhere you look.

ELSE has more than 370 members on its mailing list and in addition to the national chapter based in Ontario, an

Alberta chapter was formed in March. The group ran many successful events in its inaugural year, including a tour of a solar module manufacturing plant, tradeshow career tours, speaker panels and a solar technology workshop at the Kortright Centre for Conservation. A dry run of the Solar Ambassadors Program took place last year, and will roll out during the 2014–2015 school year to universities and colleges across Ontario and Alberta. Solar Ambassadors are a network of post-secondary students who engage their campuses in the latest solar energy technology and policy research, as well as career opportunities.

Gene Gu, a 23-year-old chemical engineering student at the University of Waterloo, was ELSE's first Solar Ambassador. He hosted two speaking panels, one in November 2013 and another in March 2014. "My goal for the first event was to bring in professionals who could give relevant information to students looking to get into the industry," Gu said. "The second event featured more academic professionals, to get their viewpoint on their research. I wanted students to get as much perspective as possible so [students] could make an informed decision when they graduate, if they wanted to get into the industry."

By organizing and hosting his Solar Ambassador events, Gu said he gained more confidence and developed his public speaking skills. "I grew a lot putting these events together," he said, attributing his growth to the mentorship he received from ELSE's programs committee and from presenting the ELSE material to his audience and collaborating with other organizations to promote the events.

Since inception, ELSE has received significant guidance and support from AMP Solar Group, a leading developer of rooftop solar projects. **Dave Rogers, President of AMP Solar**, said several of his employees are members. He feels

the company's time and money is well spent because ELSE is ensuring that the growing solar industry has enough talented and visionary young professionals, eager to make their mark.

"What I'm most excited about is what's happening in the universities because that's sort of the grass roots for the industry," Rogers said. "We think the best way to give back is by helping to develop youth in Canada who are passionate about solar. We think ELSE will provide tremendous benefits to the entire industry. ELSE is just hitting its stride and is just getting going, but it's had a pretty incredible first year."

Jeff Stephens, Lead Instructor of the Renewable Energy Techniques program at Conestoga College, has brought his students to three ELSE events to help them build their knowledge and to encourage networking with industry professionals. Stephens reported that some of his students have been approached or recruited at ELSE events. For Stephens, ELSE is "inspiring renewable energy students to think about the next level of industry development" and enabling them to "build the connections to pursue their interests."

Another of ELSE's projects for 2014 involves developing a solar PV or solar-thermal project for a prominent federal government building in Ottawa. ELSE is working with historic-preservation groups and the National Capital Commission (NCC) to determine a suitable building and the right type and size of the solar installation. "Right now, the provinces have their own solar policies, but this is a way to show government support for solar on a national level," said Van Baalen. The project is inspired by the successful 2013 campaign in the United States to re-install solar on the White House. ●

For more info, visit www.elsecanada.ca. *Nick Gustgav contributed to this article.*

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CanSIA is dedicated to developing markets, creating opportunities and building community for the solar energy industry in Canada. Becoming a CanSIA member and joining our network is for you whether you are a company, an organization or an individual who wishes to:

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- ▶ Keep informed on policy, market and regulatory developments; and
- ▶ Demonstrate leadership in the solar energy industry.

Which CanSIA Membership Level is Best for Me?

This *CanSIA Membership Levels Guide* presents an overview of CanSIA's membership level structure so that you can decide which level is most appropriate for you or your organization and understand the benefits and services that you would receive.

For more information, visit www.cansia.ca/membership, or contact **Patrick Bateman**, Director of Business Development & Member Relations.

About CanSIA

A national trade association, CanSIA works on behalf of its members to facilitate and promote the responsible and sustainable growth of solar energy across Canada. CanSIA provides education and networking opportunities for members, researches and develops renewable energy policy options for different levels of Canada's government and implements a broad range of communications activities on solar energy.



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