



SOLutions

The newsletter of the Canadian Solar Industries Association/L'Association des Industries Solaires du Canada

FEDERAL ECOENERGY INITIATIVE BUILDS ON REDI

Program Disregards PV

The federal government has officially launched the EcoEnergy for Renewable Heat (ERH) program, picking up from and expanding on a preceding solar thermal support initiative. "It's a big step in the right direction," says CanSIA president Andrew van Doorn, who adds advocacy work is still needed to encourage greater support for the photovoltaic industry.

The \$1.5 billion EcoEnergy Renewable Initiative, announced in January, is divided into the \$1.48 billion EcoEnergy for Renewable Power (ERP) program, and the \$36 million ERH program, both implemented in April and running from 2007-2011.

ERH is targeted at solar water and air heating and geothermal technologies, and a Natural Resources Canada (NRCAN) news release says it will support "a mix of incentives and support for the development of industry capacity." The incentive component, set at 25% of the purchase and installation of a qualifying system, will be offered to purchasers of solar heating systems in the industrial, commercial and institutional sectors. "Preliminary estimates suggest that, by 2011, the program will support the installation of solar space and water heating in about 700 buildings," says the release.

The incentive is fundamentally a repackaging of its predecessor, the Renewable Energy Deployment Initiative (REDI), which officially concluded March 31.

"We have a longer commitment—four years is being seen as offering some stability—and there is a bigger budget. We interpret this as a commitment to the industry."

Andrew van Doorn

"We have a longer commitment—four years is being seen as offering some stability—and there is a bigger budget," says van Doorn. "We interpret this as a commitment to the industry."

Van Doorn says CanSIA and NRCAN are both looking at ways to make the REDI funding method more efficient under ERH. As it stands, applicants provide bills and documentary evidence of qualifying costs, and NRCAN calculates the 25% incentive. Van Doorn says CanSIA is proposing a financial value be determined, per square metre, for each qualifying solar thermal technology. NRCAN could then multiply that value by the number of square metres of installed collector area, documented in a commissioning report, to quantify the federal payment.

"It's not done yet," he says, "but we're going to be looking at this to see if there is merit to changing the

25% to something more straightforward and easier to apply. On both sides, it would reduce a lot of work, reviewing individual bills, determining actual system costs and double-checking costs. It would simplify the whole process."

An ERH improvement NRCAN has already declared is a federal commitment to residential solar heating. In partnership with utility companies, energy service companies, community groups and other stakeholders, the ministry says "projects will be undertaken to explore" ways of increasing the market for residential solar hot-water systems, and it predicts ERH will result in installations "in several thousand homes across the country." Van Doorn says the industry has been asking for this for years, and early discussions with the ministry indicate a \$9-million,

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No. 9, April 2007

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SUPPORTER I

Canada Mortgage and Housing Corporation
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MINISTRY LEADS IN PV DEVELOPMENT

Victoria-based Carmanah Technologies, through a federal contract with the Ministry of Public Works & Government Services Canada (PWGSC), is about to help raise the bar for the country's largest installed photovoltaic system with a 108 kW project in Charlottetown, Prince Edward Island.

The company announced it won the \$1.42 million contract in early March. With commissioning scheduled for July, the grid-tied system will use an array of about 500 Sanyo solar modules, supplying the Jean Canfield Building with

about 10% of its electricity demand. The four-storey building, still under construction, will house about 500 civil servants, and a news release says the ministry intends it "to become a national showcase for sustainable and green design."

PWGSC's plan is to be certified gold under the Leadership in Energy and Environmental Design (LEED) green building rating system, created in the US but recently modified and adopted by the Canada Green Building Council.

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CANSIA MEMBERSHIP

Voting

- *Corporate I:*
25+ employees or revenue
>\$3 million – \$5,000

- *Corporate II:*
6-24 employees or revenue
> \$1 million – \$1,500

- *Corporate III:*
3-5 employees – \$800

- *Corporate IV:*
1-2 employees – \$400

Non-voting

- *Large government departments, utilities and energy regulators:* \$1,000

- *Small government departments and small distribution companies:* \$500

- *Large non-profits and educational institutions:* \$400

- *Small non-profits and community groups:* \$250

- *Advocate/individual:* \$100
- *Students (Must supply copy of student ID):* \$50

CanSIA's MISSION:

To develop a strong, efficient, ethical and professional Canadian solar industry, able to service an expanding domestic market, to provide innovative solar solutions to world energy problems, and to play a major role in promoting the transition to a solar energy future worldwide.

STANDARD OFFER CONTRACTS ANNOUNCED

PV Industry Waits for Greater Indication of Success

The Ontario Power Authority (OPA) has signed standard offer contracts with three photovoltaic projects that will bring nearly 23 kW of new PV capacity onto the provincial power grid.

The contracts are among the first to be awarded under Ontario's renewable energy standard offer program (SOP), which began accepting applications in November and guarantees 42¢/kWh to grid-tied PV projects less than 10 MW on a 20-year term.

In addition to the 23 kW of PV, 14 wind projects totalling 129.5 MW have been contracted, as well as three bioenergy facilities with a combined capacity of 10.2 MW, and two hydro projects totalling 2.45 MW. CanSIA PV committee chair Steve Wiebe says the "groundbreaking" program is a big step in the right direction for the solar industry, but the project list is a good indicator that more may need to be done to encourage PV subscribers.

"The province went with a conservative rate thinking if there's not enough subscription there's room to increase it," he says. "I hope that's what they're thinking, and I hope that's what they'll do after looking at these numbers."

During initial SOP consultations, says Wiebe, CanSIA recommended the PV tariff be 85¢/kWh. When it appeared solar power might be dropped from the program because the price was unpalatable, the association tempered its position, estimating a 42¢ tariff would drive the installation of 15,000 residential PV systems totalling 40 MW by 2011. Now, says Wiebe, people are surprised at what appears to be low solar enrolment.

"I think the industry was initially fairly optimistic, but when you look at the payback figures for a resi-



FireFly Energy

Firefly Energy's Richard Mash and Tina McAuley with one of the first solar projects contracted under Ontario's standard offer program. The company, offering Ontarians long-term, fixed-price natural gas and electricity agreements, uses the 9.9 kW PV system as a marketing tool.

dential system you have to be pretty philosophic before you invest. And as a pure investment opportunity, the figures are going to have to be quite a bit better."

The pure investment opportunity, which would result in larger non-residential PV installations, is certainly being contemplated in Ontario. In direct response to the SOP, Baltimore-based SunEdison LLC and SkyPower Corporation of Toronto announced the creation of a joint venture to develop, build, own and operate up to 50 MW of solar PV parks across the province. And Richard Wayte of Victoria-based Carmanah Technologies, which has an office in Barrie, says the company is looking at six or seven megawatts of projects in Ontario because of the SOP.

"There is a lot of stuff in development," says Wayte. "I haven't seen anything significant land yet, but we're talking to a lot of people. There are a lot of proposals out there, and they are under serious consideration."

The largest of the contracted PV

projects is the 10 kW Smokey Creek Farm system, followed by a 9.9 kW project installed last year by FireFly Energy, a company offering Ontarians long-term, fixed-price natural gas and electricity agreements—the 51 modules were meeting most of the power demand at FireFly's Guelph office, but the power now goes to the local distribution company. The third is a 3 kW residential project in Stouffville owned by Salvatore Amenta. Steve Eng, an engineer with Markham, Ontario's Enviro-Energy Technologies, will install Amenta's system. He says the program is a good thing but early PV adopters are finding the application procedure an "onerous" process.

"I have at least four or five other customers going through this process, and we're still in the application process, trying to find out from the utility what the transformer station and the transmission feeder station names are. Most home-

See SIMPLIFIED page 8

NEW CANSIA SOLAR THERMAL DOCUMENTS NOW AVAILABLE

CanSIA has just completed two new publishing projects promoting residential solar thermal water heating, which will help builders, engineers and homeowners understand and select solar technologies.

Assistant project manager Jessica McClay says the CanSIA solar domestic hot water (SDHW) performance directory, an electronic publication in PDF format, is now down-loadable from the association's website. It's designed for homeowners or building- and renewable-industry professionals contemplating a solar hot water installation and seeking product information.

The directory lists information about Canadian manufacturers as well as foreign-made products available within the country, and is geared to the domestic, residential-type system, says McClay.

"The size of the packaged systems dictate a residential application," she explains, "but the collector information could be extended to larger installations." There will also be fundamental information on SDHW technologies and product comparison tables, which will make it easier for readers to evaluate thermal output relative to cost and size.

"It will provide a realistic idea of what solar can do for you—the benefits it can have for your energy consumption, and compare different products."

The 2007 SDHW performance directory is new, but the

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CERTIFICATION INCHES FORWARD

First pre-packaged SDHW system gets CSA seal

Canadian Standards Association International (CSAI), the organization that applies the ubiquitous CSA seal of approval on consumer and building products across the country, has certified Canada's first pre-packaged solar domestic hot water (SDHW) system. It is a milestone in the progress of the solar industry, but CanSIA president Andrew van Doorn says members of the association are not celebrating.

"Competitively, it doesn't seem right," says van Doorn. "Last time I checked there were 17 or 18 applicants waiting, and unfortunately the process for a number of reasons is dragging on forever. There's a feeling of genuine concern, and people are experiencing a lot of frustration."

The move to certification is becoming an essential quality determinant for solar thermal support programs, and building inspectors routinely depend on the CSA seal to approve plumbing products and installations. The federal government, through the now-defunct Renewable Energy Deployment Initiative (REDI), decided to pay up to 90% of the cost of certifying pre-packaged SDHW systems.

Currently, Bodycote Materials Testing, which runs the National Solar Test Facility (NSTF) in Mississauga, Ontario, is approved to assist CSAI, the organization within the CSA group that deals with certification, to assist with testing some of the solar-specific aspects of the systems. The federal contribution agreement requires solar industry applicants to submit testing quotes from CSAI and Bodycote to Natural Resources Canada (NRCan).

By last fall, NRCan had received

applications from 16 manufacturers looking to certify 21 systems, and many had submitted quote requests to CSAI and Bodycote. In November 2006, Ontario-based EnerWorks Inc., a manufacturer of solar thermal collectors and water heating systems, became the first



Bodycote Materials Testing Canada Inc.

The solar test lab at Bodycote Materials Testing Canada Inc. is being used to certify solar domestic hot water systems.

Canadian manufacturer to receive certification for its pre-packaged SDHW system. But the company submitted the system to CSAI in October 2005.

"There have been all manner of delays," says NRCan's Bruce Sibbitt, "from response times at different organizations, to interruptions in REDI funding and equipment limitations at the test facility, and weather. We had a terrible fall, and the 30-day exposure period requires a specific quantity of radiation on each of those 30 days. That took an incredibly long time. It hasn't been easy."

The new Conservative government froze REDI funding for the first half of 2006, and then the program ran out of money in December. Two manufacturers, EnerWorks and Copperhill Alternative Energy Inc., were able to sign a contribution agreement before

See MANUFACTURERS page 10

NEW BC ENERGY PLAN OFFERS OPPORTUNITY

BC has released a new energy strategy document outlining ambitions to curb greenhouse gas (GHG) emissions, promote renewable resources, implement a fixed-tariff program for small-scale generation, and develop energy efficiency standards for new buildings.

"The most important part of this plan is the clear overriding goal for clean energy and greenhouse gas reductions," says Joe Thwaites, president of Taylor Munro Energy Systems, a Vancouver-area company that specializes in solar water heating. "Those big goals are critical. Everything will fall from that."

Thwaites says the province's approach to climate change in recent months represents a "sea change in attitude." And while the broad intent of *The BC Energy Plan: A Vision for Clean Energy Leadership* is aimed at provincial energy self sufficiency and GHG reduction, the document contains specific policy ambitions certain to capture the interest of BC's solar thermal and photovoltaic industries.

"This is an opportunity to engage in constructive dialogue," says Thwaites. "There's an opportunity for programs to be put in place."

Highlights for the solar thermal industry include the intent to acquire 50% of BC Hydro's incremental electricity demand through conservation by 2020. One policy action to help attain this goal is the development of energy efficient building standards, a commitment also included in the government's February speech from the throne, which promised "a new unified BC Green Building Code." Working with industry, stakeholders and local governments, the province will implement the standards for new buildings by 2010. "Regulated stand-

ards for buildings are a central component of energy efficiency programs in leading jurisdictions throughout the world," says the new energy plan.

Thwaites believes mandatory solar heating technologies should be on the table as industry and government work out the details of what those standards will be. "I think using the building code as a measure for promoting solar is a really good instrument. It has been very successful in Barcelona, and it spread through Spain. It's spreading now throughout other parts of Europe, where solar domestic hot water systems are an entrenched part of building technology and are part of the code."

The plan also includes a pilot project for energy performance labelling of homes and buildings, and utilities will "be encouraged to explore and develop rate designs to encourage efficiency, conservation and the development of renewable energy."

Promising once again to work with industry and stakeholders, the government also says it will "promote energy efficiency and alternative energy systems, such as solar thermal and geothermal throughout the province." One specific suggestion is that these technologies can be supplemented by natural gas.

Broad ambitions that will appeal to the photovoltaic industry also appear in the new energy plan, including pronouncements the province must be capable of meeting all its own electricity needs by 2016, that "clean or renewable" power will account for at least 90% of total generation, and all new generation will achieve zero net greenhouse gas (GHG) emissions.

Of critical interest to CanSIA and

the BC PV industry is the province's intention to establish a "standing offer contract" for clean electricity or high efficiency electricity cogeneration projects. Transmission or distribution connected generators of 10 MW or less will be eligible to receive a set price, yet to be determined, provided they meet the province's definition for renewables or cogenerate heat and power with an overall efficiency of 80%. The contracts will be for non-



Carmanah Technologies

Energy, Mines and Petroleum Resources Minister Richard Neufeld introduced BC's new energy plan at Carmanah Technologies in Victoria.

firm energy, and the province has specified there will be no initial quota for this type of supply.

"This is something we have been recommending for a long time," says Guy Dauncey, president of the BC Sustainable Energy Association. "Our only concern is the price that will be offered to producers of solar, wind and tidal energy."

The strategy document says the contract price will be based on the prices paid in the most recent BC Hydro energy call, but Dauncey thinks the province should follow

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GAS-FIRED PLANT TO ACCOMMODATE PV RESEARCH

The University of Toronto, ARISE Technologies and The Portlands Energy Centre (PEC) have joined forces to create what the trio are calling Canada's largest solar research facility, to be located on the PEC site on Toronto's waterfront.

In a news release, Ontario Energy Minister Dwight Duncan said the project would establish Toronto and Ontario as world leaders in solar energy R&D and education. U of T students and ARISE, says the announcement, will use the facility to conduct research on renewable energy systems and technologies, which "will help develop the utilization of PV systems for commercial and utility scale systems."

Under the agreement, PEC will provide the land and ARISE will install a photovoltaic system between 500 kW and 1 MW. The PV plant, scheduled for installation in late 2008 or early 2009, is expected to cost \$5-\$8 million and will utilize PV cell technology developed by ARISE and U of T. Later this year, ARISE plans to issue a community-based share offering that will allow residents to participate in the project.

"This project will provide an opportunity for our systems group to study and optimize implementation of large scale systems for deployment in Ontario," said ARISE president and CEO Ian MacLellan.

The Portlands Energy Centre, owned by a limited partnership between Ontario Power Generation and TransCanada Energy, is a planned 550 MW gas-fired power plant scheduled for full operation in 2009. □

ARISE TAKES FLIGHT WITH PV PLAN

Company makes progress in technology development

Ontario's ARISE Technologies Corp. says it has reached "technology milestones" in the development of a new method to produce solar-grade silicon and patentable PV cells.

"While we still have a lot of work to do, this provides the foundation for an exciting R&D program in 2007," said ARISE president and CEO Ian MacLellan in a news release.

"Most importantly, these results have confirmed our technology strategy as we enter into the detailed planning stage for our proposed manufacturing programs in Germany and Canada."

ARISE's application for a \$6.5 million grant to build a silicon feedstock pilot plant on the north campus of the University of Waterloo has been approved by the Sustainable Development Technology Corporation (SDTC), set up by the federal government to support new environmental technology. The SDTC money will be leveraged by a \$13.3 million cash and in-kind commitment from a consortium of partners led by ARISE. Consortium agreements must be in place before the SDTC contribution agreement is finalized, but the company expects that process will be complete by the end of the first quarter of 2007.

Publicly traded on the Toronto Stock Exchange and Frankfurt Open Market Exchange, ARISE believes its entrance to the solar-grade silicon market will be well timed, projecting tight supply for silicon feedstock over the next three to five years. It is also promoting a novel silicon recovery technology that reduces waste in the ingot/wafer slicing process.

A milestone recently announced by the company is the production of high purity silicon samples in two different laboratories. Now that the process is pro-

ducing consistent results in both laboratories and the samples are of sufficient size, ARISE has sent samples to an independent laboratory for analysis.

Another milestone, says the company, is successful test results of a full-size, 100 mm diameter, ARISE PV cell. The results indicate performance efficiency similar to a much smaller cell developed earlier, and the company believes this confirms the scalability of its technology. The company also claims its cell's efficiency, which is the ratio of electricity produced when compared to the potential power of the sunlight striking it, and was measured at 12.7% in the lab, will achieve 18% in production once other technology features are added and optimized. Commercially available PV modules available now are rated at 12-18% efficiency.

While its PV cells are still under development and have yet to be commercialized, the company plans to commence shipping to PV module makers in 2008.

The University of Toronto and California-based Komag Inc., a manufacturer of thin-film disks for digital data storage, are partners in the development of this new PV technology, and they hope to open a \$70 million PV cell production facility in Bischofswerda, Germany. In late December, following an application for government funding from the Saechsische Aufbaubank, ARISE was approved to receive a loan of about \$19.2 million, repayable over the term of the project.

ARISE also expects to be eligible to receive refundable German tax credits in connection with the project. Construction is scheduled for fall 2007. The plant will be operational by the second quarter of 2008. □

CMHC SELECTS 12 NET ZERO HOME PROJECTS

Canada Mortgage and Housing Corporation (CMHC) has re-branded its Net Zero Energy Healthy Housing initiative and selected 12 winning proposals, which will be built under the new EQUilibrium housing initiative name.

The goal of the initiative is to promote the construction, followed by a demonstration period, of homes that boast net zero energy consumption. But EQUilibrium is about more than energy, explains CMHC's Duncan Hill. The houses will be built in accordance with five principles outlined in a call for expressions of interest released last year: occupant health and comfort, energy efficiency, renewable energy production, resource and water conservation and reduced environmental impact. To encourage serious responses, says Hill, the call asked that projects be led by a professional builder or developer.

"We put it out in May and had no idea what we would get. It was a shot in the dark," says Hill. "There were over 600 inquiries and 72 actually gelled into reasonable expressions of interest. There were only two not worth considering. We had 70 respectable expressions of interest, sufficiently detailed and reflective of enough commitment and thought from the project teams to warrant a full evaluation, which blew our minds. It's been quite a process."

While the selection process looked at technical feasibility, Hill

says affordability and ease of replication are key concerns. The final selection process was administered by the Royal Architectural Institute of Canada (RAIC), and 12 projects were selected in mid-February: four in Alberta, three in Quebec, three in Ontario, one in Saskatchewan and one in Manitoba. RAIC praised CMHC and EQUilibrium for climate change leadership. "Architects across Canada have \$40 to \$45 billion worth of projects on the boards," says RAIC president Vivian Manasc. "These buildings will last 50 to 100 years. Given these facts, and as responsible Canadians, architects have been actively working to ensure further projects reduce our carbon footprint. EQUilibrium fits nicely with the profession's direction."

Hill says solar energy fits nicely with EQUilibrium, and each of the 12 projects will be equipped with solar thermal and photovoltaic technologies. Through the initiative, CMHC has a two-fold message, which is that solar energy should not be thought of in isolation of energy efficiency, but solar energy *should* be thought of. "There are opportunities in our climate for solar hot water and PV," says Hill. "The more roofs we can get into action, the more the industry will develop a capacity to deliver products and innovations, and the more comfortable municipalities and utilities will be dealing with them."

Construction of the 12 projects

is expected to be substantially complete before the end of the year, followed by a public demonstration period of six to 12 months beginning sometime in 2008. Ultimately, CMHC expects the houses will be sold, but title and occupancy is up to the various builders.

"Neither CMHC or the government is paying a dime for these houses to be built," says Hill. "These guys have volunteered to try to build net zero energy healthy homes, EQUilibrium homes, because they think it's doable. They want to see how close they can get, and at the end of the day turn around and sell them. The extent to which they are successful is part of the project."

The 12 teams will receive \$50,000 each for project documentation, performance testing and public demonstration. After the demonstration period, Hill says a "real-life" monitoring of the homes and the behaviour of their occupants will begin. Detailed reports on the individual houses and the EQUilibrium project, if all goes well, will occur in late 2010.

"The big wild card in all of this is occupant habits, and how they run the houses," says Hill. "In these homes it will be interesting to see what monitoring tells us about the energy needs and demands of futuristic housing models. I suspect it will demonstrate you can take housing so far, and the next step will be tweaking occupant expectations and habits." □



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SIMPLIFIED PROCESS NEEDED FOR SOLAR

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owners have no idea what that means.”

Eng says it can take three months from the time he begins working with a client to getting a contract signed with the OPA, and that’s too long. He says he and others are advising the province to consider a simplified application and connection process for systems under 10 MW. “The process they have now is geared toward corporations putting in larger systems, commercial operations,” says Eng. “They need to simplify this for homeowners.”

Wiebe agrees, suggesting the 142 MW of projects that signed contracts, which are not PV, may indicate the readiness and commercial orientation of other technologies. After an initial period of organization passes, he says, subsequent contract announcements may reflect evolution in the Ontario PV market.

“PV systems are smaller and there are more customers involved. Compared to wind, where a lot of people already have experience. With PV, more customers have to be educated. They have to learn how the technology works, and learn about the SOP. I may be optimistic, but I think this may be a part of the low initial numbers. There’s a learning curve.”

The OPA said it has received another 58 applications under the SOP and will award contracts as the projects are evaluated. The contracts announced represent a capital investment of \$336 million. □

ONTARIO EXPERIENCE TRAVELS TO US

CanSIA shares standard offer challenges, successes

A US congressman invited CanSIA to appear in Washington, DC recently to share its experience with Ontario’s standard offer program (SOP).

In late February, Washington State Congressman Jay Inslee hosted an open presentation for the benefit of federal policy advisers, congressional assistants, industry associations and NGOs. Inslee’s aim was to present author Hermann Scheer, who is currently on tour to promote his latest publication: *Energy Autonomy: The Economic, Social and Technological Case for Renewable Energy*.

CanSIA was represented at the

“ I learned there is an enormous potential for sharing our experience. In Ontario, as we continue to build the solar industry, there is a lot we can learn from what has worked and not worked in other places. Keeping that dialogue open is very helpful.”

Melinda Zytaruk

event by Melinda Zytaruk. Formerly the general manager of and a policy director with the Ontario Sustainable Energy Association (OSEA), Zytaruk was a primary stakeholder during public consultations on SOP.

About 30 people attended the meeting, says Zytaruk, who conveyed the experience of getting a renewable energy tariff established in Ontario, what it involved and where it stands.

“The message that seemed to be of most interest to people was that while it appeared getting a tariff in Ontario was an unlikely result,

because there was an expectation we would be an RPS (renewables portfolio standard) market, we had a broad coalition of support,” explains Zytaruk. “Many stakeholders saw this really was the way to accelerate the development of renewable energy.

“One of my important messages was that the tariff is for all technologies, and that policies to support all renewables is important, and that getting solar into the tariff was a big victory in Ontario.”

There was a very high level of interest from those who came to the meeting, says Zytaruk, who was questioned about the barriers the Ontario solar industry has overcome, who its detractors were in the fight to be included in the SOP, and what issues it continues to face. “I learned there is an enormous potential for sharing our experience. In Ontario, as we continue to build the solar industry, there is a lot we can learn from what has worked and not worked in other places. Keeping that dialogue open is very helpful.”

Hermann Scheer, president of EUROSOLAR, chairman of the World Council for Renewable Energy; president of the International Parliamentary Forum on Renewable Energies and member of the German Parliament, told the gathering renewable resource development is the only route to economically generated energy, says Zytaruk. He focused on the need, she says, to understand the forces at play that support the status quo and oppose alternative energy solutions. Scheer also spoke in support of renewable energy tariffs.

“His key message is there is no technical barrier to 100% renewable energy. It’s about power and politics, and we have to change the way we think about energy, who has control and who is making decisions.” □

CANSIA STARTS WORK ON 2007 TORONTO CONFERENCE

CanSIA's 2007 annual conference will be held in Toronto in November, and the association is now looking for volunteers to assist with preparations for the event.

Canadian Solar 2007 will be the association's largest solar event to date, with more than 400 delegates and 50 exhibitors expected to attend. The Toronto location is a change for CanSIA, which traditionally holds the country's annual solar conference in Ottawa.

"We're hoping to increase our visibility a bit more, and because we're a national association we want to start moving the conference to different cities," explains CanSIA research officer Krista Mayer. "Toronto is a good, logi-

cal step. Next year we hope to take it out of Ontario."

This year, CanSIA has decided to offer members a greater role in the planning process, and is hoping to share some of the workload. "We're at the beginning stage of planning," says Myer. "We're still choosing the venue, and we're hoping to introduce more public events and workshops."

CanSIA is looking for 20-25 individuals to fill positions in five working groups: speakers and sessions, corporate and government fund raising, onsite volunteer management, technical workshops and public events. Those interested can contact CanSIA by calling (613) 736-9077, or through email at info@cansia.ca.

CanSIA is also working on a plan to attend Solar Power 2007, an annual conference held by the US Solar Electric Power Association and Solar Energy Industries Association, to be held September 24-27 in Long Beach, California. The association's attendance is supported by and will be done in conjunction with Foreign Affairs and International Trade Canada and Industry Canada. Mayer says a Canadian reception, which was also offered last year at this event, will be held.

"We're really hoping to give other people a chance to find out what's going on in Canada," says Mayer. "At the same time we'd like to give our members a chance to exchange information both ways. It's important." □

GREEN BUILDING LEADERSHIP PROGRAM GOOD FOR SOLAR

CONTINUED FROM PAGE 2

All new federal government office buildings must now meet LEED gold-level standards, says the ministry.

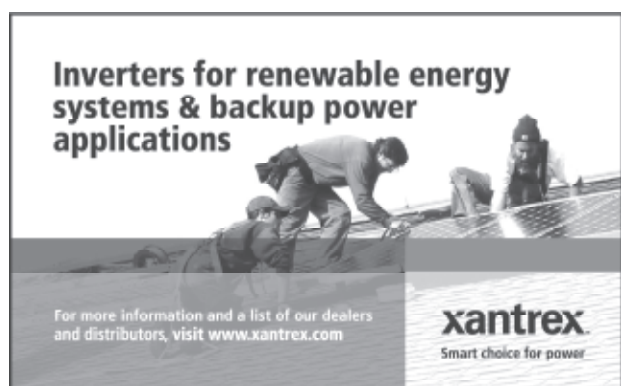
Whether on other public buildings or connected to the private sector, Carmanah's project manager for the PEI project, Richard Wayte, is "one hundred percent absolutely sure" LEED will result in more solar installations.

"LEED is a good thing," he says. "There is a section dedicated to developing on-site generation. They might not use PV, because that's not necessary, but it's a step towards sustainability in general. We expect PV will be part of a very high percentage of these projects."

Wayte says Carmanah has "a number of high-profile clients and projects," some contemplating PV installations in the 3 MW range, and half of them are evaluating a de-

velopment based on LEED criteria.

In 2006, Carmanah was also the contracted installer of Exhibition Place's 100 kW PV system in Toronto, which now stands as Canada's largest solar electric plant. Like the Toronto site, the Jean Canfield Building will have Web-based monitoring technology, which will display in the lobby the system's energy generation performance in real time. □



BUDGET INCLUDES TAX CHANGES

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four-year pilot project is being contemplated.

"NRCan is at an exploratory stage with this right now," he says. "From the industry's point of view, it's small when compared to everything else, but it's huge versus what we've had in the past. At \$9 million, we're talking about something that can have an impact."

Last but not least, NRCan says ERH will help establish a market for solar thermal technology by supporting the development of standards and certification, by promoting adoption through building codes and provincial and municipal regulations, and by helping to train technicians and installers. It's a smaller part of the program, says van Doorn, but these are things CanSIA is putting a lot of focus on. "These are fundamentals of any industry trying to get into the market," he says. "We need these things."

Something the whole ecoEnergy initiative appears to disregard is photovoltaic energy. ERP targets the installation of 4,000 MW of generating capacity from wind, biomass, small hydro and ocean energy by providing a 1¢/kWh payment for the first 10 years of a project's life. It's not designed to accommodate PV, and both van Doorn and CanSIA PV committee chair Steve Wiebe are disappointed.

"This is a short-sighted approach," says Wiebe, who believes NRCan should be promoting residential PV through the new federal renewables initiative. "Investing in this industry, maybe you're not going to see huge CO₂ reductions in the short-term, but you would be building an industry, and building capacity. Then, in a five- or 10-year window, you would really start to see a benefit."

Wiebe, however, is happy about the 2007 federal budget, which announced changes to the accelerated capital cost allowance (CCA) for clean energy generation. As it now stands, renewable generation assets acquired after February 23, 2005 and before 2012 are eligible for a 50% accelerated CCA under Class 43.2. For assets acquired before February 23, 2005, 30% accelerated CCA is provided under Class 43.1. Both classes currently include solar thermal assets, but only if they are used in an industrial process or a greenhouse. PV assets are also eligible provided they have a minimum capacity of 3 kW.

Budget 2007 proposes that eligibility for both classes be modified to eliminate the minimum size requirement for PV systems and that building-integrated PV be included. It also proposes to extend eligibility for solar thermal systems under both classes to include commercial and residential applications, other than swimming pool heating. Examples include space heating of commercial and apartment buildings, and hot water heating for laundries, car washes and hotels.

In addition, for all renewable technologies, the budget proposes to extend eligibility for Class 43.2 to assets acquired before 2020.

Van Doorn says the changes "provide a significant signal that this government is listening" to the solar industry. "CanSIA has been advocating for these changes since 2002, as the tax act previously treated solar unfairly compared to other renewable energy technologies such as wind."

If the budget is passed by Parliament, the changes will apply to eligible assets acquired on or after March 19, 2007. □

MANUFACTURERS FACE CERTIFICATION DELAYS

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REDI expired, and Copperhill will likely be certified this spring. Following Copperhill, as van Doorn pointed out, as many as 18 manufacturers are now at some stage of the process, and Sibbitt says five have completed all the requirements to gain federal support. He also expects NRCan's ecoEnergy Renewable Heat initiative, a four-year program announced in January, will soon pick up certification funding where REDI left off.

"If manufacturers can get their products in at this time of year, spring or early summer, the 30-day outdoor-exposure testing period, which is a problem in the fall and winter, suddenly becomes a much quicker operation," advises Sibbitt. Four years of stable government funding should also help, he says, and weather permitting it may be possible, once the whole process gets rolling again, to certify one system per month. "The teething problems are mostly behind us. Things like getting the NSTF accredited, and getting its agreement worked out with CSA, some of these things were one-time issues that we had to get past."

Van Doorn says certification remains a CanSIA priority, and the association will soon be discussing the matter with NRCan in its consultation on the ecoEnergy initiative. CanSIA members need to know where they stand on this, he says, and how the process can be accelerated.

"One thing that is quite clear is NRCan realizes the importance of this," he says. And one of the fundamental roles of any industry association is standards and trying to maintain a certain level of quality in the industry. We don't want to burn our own market. The priority is legitimate, but we're not quite clear yet on how we're going to solve the issue of delay." □

INFORMATION PACKAGE PROMOTES 'SOLAR READY' HOMES

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idea is not. A now-outdated version was published in the 1980s, says McClay. One major change in the industry since then is a move toward certification. The new directory lists tested products certified by the Canadian Standards Association (CSA), as well as products certified by European and US facilities, but out of necessity it also contains uncertified equipment.

"We've decided for this year, because the CSA process isn't mov-

ing ahead as quickly as anticipated, we had to expand the constituency of companies that could apply," says McClay.

"As more products get certified we may phase that out, but for now this is fair."

CanSIA has also now completed a solar-ready SDHW marketing brochure and seven-page technical guideline. The marketing brochure is a tri-fold handbill describing the fundamental benefits of owning an SDHW system, as well as the basic modifications required

during the construction of a new home to make it "solar ready," which is to say more accepting of a future SDHW installation. It also recommends the technical guideline document for further information.

"This is basically an information package," says McClay. "If readers need the introduction in the brochure they can use it, but others will just go straight to the technical guideline, which has more than lay-

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SOLAR TRAINING COURSES IN CANADA

Energy Systems Engineering Technician and Technology Programs: St. Lawrence College offers hands on experience with system design, photovoltaics and solar water and air heating.
(613) 544-5400 ext. 1528
www.sl.on.ca/fulltime/F1002.htm
energyhouse.ati.sl.on.ca/

Introduction to Renewable Energy: Mohawk College offers an introductory course on renewable energy, including solar, wind, hydro and ground source energy.
(905) 526-6458
www.mohawkcollege.ca

Solar Hot Water System Installer Course: Northern Lights College in Dawson Creek, BC, is offering a 6-day course on residential/commercial solar hot water system installation from April 23 - 28, 2007.
(250) 784-7509
www.nlc.bc.ca

PV technician's certificate: Seneca College, in partnership with CanSIA, offers an eleven-part training program for people who want to become professionally trained in the design and installa-

tion of solar photovoltaic systems.

(800) 572-0712
www.senecac.on.ca/eto/pages/photovol.html

Introduction to photovoltaics: The British Columbia Institute of Technology offers a two-level program of study in off- and on-grid PV systems.
604-434-1610
www.bcit.ca/admission/register

Renewable energy workshops: The Kortright Centre for Conservation offers four workshops, three with graduated training on how to generate electricity using solar and wind energy systems, and one on solar water heating.
(905) 832-2289 ex: 239
www.trca.on.ca

Renewable energy career programs: Willis College of Business & Technology offers a range of workshops and full training programs in renewable energy.
(613) 233-1128
<http://www.williscollege.com>

SOLAR CALENDAR

April 16-17, 2007: *Opportunities to Develop Renewable Energy Projects with First Nations, Industry and Government Partnerships*, Toronto, Web site: www.canadaforum.com

April 16-17, 2007: *Ontario Power Supply Forum*, Toronto, Web site: www.canadianinstitute.com

April 23-24, 2007: *6th Annual Quebec Forum on Electricity*, Montreal, Web site: www.canadianinstitute.com

April 27-29, 2007: *Green Living Show*, Toronto, Web site: www.greenlivingshow.ca

June 10-14, 2007: *Second Conference of the Solar Buildings Research Network and 32nd Annual Conference of the Solar Energy Society of Canada*, Calgary, Web site: www.solarbuildings.ca

June 13-14, 2007: *Ontario Power Summit*, Toronto, Web site: www.insightinformation.com □

TASK TEAM LIKELY TO HAVE SIGNIFICANT IMPACT

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the example of Ontario's standard offer program (SOP), which provides 20-year contracts at 11¢/kWh for distribution connected wind, biomass and small hydro projects, while photovoltaic installations receive 42¢/kWh.

Dave Davies, spokesman for Carmanah Technologies, a BC-based supplier of PV systems with offices in Alberta, Ontario, California and the UK, says Carmanah is expanding its operations in Ontario based on opportunities resulting in part from the SOP. Davies enthusiastically supports the planned BC standing offer contract program, saying PV-based contracts will help meet the objectives of the provincial energy plan.

"Carmanah is doing business all around the world, and the home province is moving forward and catching up to what other markets have been doing," says Davies. "It's good political will."

While many essential details must be determined before the BC energy plan is really understood, the provincial ministries of energy and environment and Natural Resources Canada have already initiated solar energy consultations through an industry-government task team, which includes Carmanah and Taylor Munro. Working under the banner of the 100,000 Solar Roofs Roadmap Project, the team will determine how BC can utilize more photovoltaic and solar thermal technologies through a program promoting residential installations. The project

was launched in late 2006 with the objective of reporting to the government before the end of 2007. Coincident with the release of the new energy plan, the task team's reporting schedule has been accelerated, says Thwaites. Its deadline is now May, and its recommendations will likely have significant impact on new policy. There is "optimism around the table,"

"This is an opportunity to engage in constructive dialogue. There's an opportunity for programs to be put in place."

Joe Thwaites

says Thwaites, that this is "an opportunity to have good work well understood and hopefully implemented."

"I think the promotion of and programs associated with solar heating and PV are going to be wrapped up under the umbrella of the 100,000 solar roofs initiative," he says. "There may be some things happening on the side, but I think there is going to be a push to get it all together."

If a standing offer contract price for PV remains unresolved by the 100,000 Solar Roofs Roadmap Project, CanSIA's PV committee chair, Steve Wiebe, says the association is eager to consult with the BC government. The experience gained by working with Ontario on the "groundbreaking" SOP

will be used to plan an approach, he says.

Thwaites says recent BC activities are a great opportunity to form a BC caucus of CanSIA, pointing out the national association is not represented at the 100,000 roofs initiative. "The staff support the Ottawa office gave the Ontario standard offer contract process was invaluable, and we would certainly welcome the same involvement here in BC."

One new program announced in the document that may benefit the solar thermal and PV industries alike is the Innovative Clean Energy Fund. The province will establish the \$25 million fund to support the development of clean power and energy efficiency technologies in the electricity, alternative energy, transportation, and oil and gas sectors.

The fund will assist the research, development and demonstration of emerging technologies. Technologies that are already commercial but require more widespread adoption will also benefit, says the plan. These technologies require assistance "such as the dissemination of information and technology transfer, or government taking leadership in applying the technologies in government operations." With input and advice from an industry-government committee, the fund will be managed by the Ministry of Energy, Mines and Petroleum Resources, which is now examining ways of gathering financial support for the initiative from consumers through "a small charge" on electric and gas utility services. □

PACKAGE GEARED TO PEOPLE WITHOUT SOLAR HOT WATER EXPERIENCE

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man's information. It's more for engineers and builders. It's all geared to people who don't have much experience with solar hot water."

Both the brochure and guideline

were funded by Natural Resources Canada, says McClay, and CanSIA has printed 500 English copies of each, plus 100 French copies of the technical guideline. About half of the printed material has been mailed out to provincial merit con-

tractor associations and home-builders' associations, as well as architecture programs at universities and colleges. Bilingual versions of both publications are downloadable in electronic format at www.cansia.ca. □