

AWARD

Solar Developer of the Year | City of Toronto

NOMINEE

City of Toronto

CONTACT:

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NOMINATED BY:

Self-Nominated

Summary:

Set out a brief synopsis of the initiative (i.e. project, technology, service). This summary may be used during the event promotion.

The City of Toronto and its Local Distribution Company, Toronto Hydro, are partnering to develop solar PV installations on City-owned facilities

Description:

Please provide as much detail as you can to describe the initiative. Simply provide a description of the project, technology, service, etc. being considered. Do not address here how it was done or what it achieved.

In 2010, Toronto City Council approved a partnership between the City and Toronto Hydro whereby the two parties would develop and co-own solar PV installations on buildings owned by the City. Projects have been built through Feed-in Tariff contracts (FIT 1, 2 and 4) as well as through the microFIT program. Additional contracts have also been announced by the IESO under FIT 5.

The project portfolio consists of installations ranging in size from 3 kW to 500 kW, and includes both ballasted and elevated truss systems, as well as a 10 kW ground-mounted solar carport. The total size of the FIT and microFIT portfolio is 10 MW DC.

Plans for an additional 6 MW of large scale ground-mounted and rooftop net-metered systems are well underway.

1. Innovative Approach:

25/100 points

Please describe which kind of innovation and creative approach that was used to achieve outstanding results. In what way has the initiative pushed the envelope of current norms, traditional results and standard approaches?

There are a number of innovative elements to this program. The partnership itself – which leverages each party's strengths and assets – is, to the best of our knowledge, unique. While we are aware of municipalities that have retained LDCs to carry out solar installations on their buildings, they typically follow a standard design/build project model, with 100% municipal ownership. In our case, both partners are active participants in the entire construction and ongoing ownership process.

There was no road map for the program. For both the City and Toronto Hydro, this has been a process of learning by doing. At the end of each round of FIT projects, a detailed "lessons learned" session was held. The entire program recently went through a rigorous year-long business process mapping exercise.

Another element of the program was that multiple contractors and suppliers were utilized in order to gain experience that has been applied in later rounds.

A major challenge to solar in a city which is growing vertically is the potential for shading of installations. We were able to develop a protocol with our City Planning division that allowed us to identify height restrictions for possible new developments to the south of our proposed projects.

2. Economic Benefit:

25/100 points

Highlight the benefits, with a sense of financial benefit, cost savings, emission reductions or other directly attributable benefits of the initiative. Did this initiative deliver or exceed anticipated value, results and returns? If you include confidential and commercially sensitive information, it will be treated as such. Please ensure you note the following - do not publicize.

Our current and contracted projects are generating GHG savings of 525,000 kg and revenues of \$3.83 M annually. Our planned projects should generate 300,000 kg of GHG reductions and \$440K of electricity cost savings. Our systems are performing at or above anticipated levels.

3. Engagement:

25/100 points

In what way(s) did the nominee undergo meaningful stakeholder/customer engagement and how has it been incorporated into the design and execution of the initiative? Highlight the manner in which the initiative was communicated to promote the importance and benefits of solar energy while achieving business and stakeholder/client objectives. Demonstrate how the proponent listened to its audience and acted on the advice.

Three major stakeholder groups were engaged – City Council, several City divisions, and the public. As noted above, the program was approved by the Executive Committee and City Council in 2010. Program revisions to reflect changes to FIT were also approved in 2013 and 2015. All reports were posted publicly.

Fact sheets on each installation, highlighting estimated revenues and CO2 reductions, were circulated to the member of councillor within whose ward the installation was taking place. The fact sheets generated questions and a great deal of positive feedback. Some councillors circulated the fact sheets to their constituents.

City Divisions were engaged in their role as operators of buildings on which the PV systems were installed. The objective was to develop a "win-win" approach by demonstrating how the installations could drive better roof repair and maintenance. In some cases, re-roofing projects were accelerated to accommodate the PV systems, sometimes with financial assistance from the PV program. In other cases, projects were delayed or cancelled because the divisions did not have sufficient funds to proceed with the re-roofing. In a number of projects, schedules were developed to accommodate operational needs (such as ice installation in arenas).

During the first round of FIT projects, a media launch was held at one site where the PV system was visible from the ground. In addition, posters were placed in publicly-accessible buildings advising of the construction of PV systems; however, the posters generated no public response, so this practice was discontinued.

4. Corporate and Sustainable Responsibility:

25/100 points

Describe the environmentally conscientious approach during the design and execution of the initiative. Give concrete examples of how your initiative has benefited the environment (ex: saved X amount of CO2 emissions, reduced X amount of GHG, etc.) Explain the ways and manners by which this initiative was undertaken with the intent of demonstrating true corporate responsibility.

Our PV program is both driven by, and helps to inform, the City's environmental objectives. It was developed as one aspect of City Council's 2007 climate change plan, which set as a target an 80% reduction in GHG emissions by 2050. This target was unanimously re-affirmed by Council recently in an updated climate change report which directed that the City "lead by example" by installing 24 MW of renewable energy by 2020. The program has placed us in a good position to meet this target through continuing to install PV, and to expand into solar thermal projects.

The success of the program also encouraged Council to adopt, as part of the Toronto Green Standard, a target of generating 5% of energy consumed by new City-owned buildings from renewable sources. All new City buildings must be built as "solar-ready", a requirement that the Province is now considering as part of the Ontario Building Code.

Both the City and Toronto Hydro have relied extensively on students and recent graduates in the delivery of our program. We believe this demonstrates a commitment to the long-term development of the solar industry in Toronto and the rest of the country.

As a result of the program's success, we are proceeding with pilot projects which will combine solar PV generation and battery storage for City buildings.

PHOTOS



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