# Lily Lake Solar Farm

***"Ontario's First 10 MW Municipally Owned Solar Farm"***

PETERBOROUGH UTILITIES

# About the Facility

Peterborough Utilities Inc. (PUI) has constructed a new 10.0 MW solar PV generating facility on approximately 140 acres of rural lands located at the northwest corner of Lily Lake Road and Fife's Bay Road across from Hydro One's Dobbin Transformer Station.

PUI has developed the project in an environmentally responsible manner in accordance with applicable legislation and to following up on project related commitments. PUI has completed the Environmental Impact Statement (EIS) and has obtained the requisite permits for the project from the Otonabee Region Conservation Authority (ORCA) and Ministry of the Environment.

PUI has committed to creating a minimum 30 meter buffer between the project and Middle Jackson Creek wetland. Within this buffer, PUI will replant trees and allow existing agricultural lands to return to a natural environment. PUI has committed to planting five new trees for every tree removed from the project properties.

PUI will be working cooperatively with neighbouring residences regarding options to screen the view of the solar farm with the intent of completing this work by the fall of 2011.

The Lily Lake solar farm will provide a number of environmental and social benefits (wetland protection, local employment & service contracts) and will produce enough energy annually to supply approximately 1,500 homes with green energy.

# Fact Sheet

- The Lily Lake Solar Farm has a capacity of 10 MWac comprised of 20 solar blocks of 500 kWac.
- The facility will utilize thin film amorphous silicon (a-Si) solar PV modules from two different suppliers.
- Thin film a-Si solar panels are less efficient than crystalline silicon solar but are significantly less costly to manufacture, more flexible and durable, and able to absorb more diffuse light than crystalline silicon solar panels.
- Phase 1 will comprise 5 solar blocks of 500 kWac and will utilize a total of 9,600 Optisolar solar PV panels.
- Each Optisolar panel is 2 m high by 3 m wide comprised of twelve solar PV modules of 0.5 m by 1.0 m arranged in a 4 x 3 grid and generates between 305 and 372 Watts.
- Phase 2 will comprise 15 solar blocks of 500 kWac and will utilize a total of 94,230 Masdar PV solar modules assembled on 3,490 panels.
- Each Masdar solar panel is approximately 4.0 m high by 10.0 m wide comprised of twenty seven solar modules of 1.1 m by 1.3 m arranged in a 3 x 9 grid, and generates between 2,295 and 2,700 Watts.

# Fact Sheet (cont'd)

- PUI has a Renewable Energy Standard Offer Program (RESOP) contract with the Ontario Power Authority (OPA) for the project with a 20-year term and a fixed rate of 42 cents per kWh.

- PUI has a completed Connection Impact Assessment (CIA), Connection Cost Recovery Agreement (CCRA) and Distribution Connection Agreement (DCA) with Hydro One Networks Inc. for the project that permits connection and operation of the facility on Hydro One's local distribution grid.

- The general contractor for the project was Miwel Construction. At the peak of construction, the project employed approximately 120 workers. Masdar panels were assembled off-site within a warehouse and delivered to site fully assembled to facilitate construction during the winter.

- The facility entered into commercial operation in early April 2011 with the entire 10 Mwac project completed in late June 2011.