



## **BACKGROUNDER**

### **Pole-Mounted Solar Panels Combine Renewable Energy and Smart Grid**

Individual solar panels will be mounted on 200 hydro poles in Georgetown, Acton and surrounding communities as part of an innovative project by Halton Hills Hydro that combines renewable energy and smart grid technology

Each panel generates 1 kWh of energy per day, which is distributed directly to customers along the same hydro lines. The panels feature remote monitoring technology that provides important data on the distribution system. By placing solar panels on existing infrastructure, the project produces clean energy and improves system monitoring while respecting the area's natural heritage.

If the pilot project is successful, there is potential to expand to as many as 1,400 poles, which could power about 50 homes.

#### **Benefits:**

- The panels feature monitoring devices that enhance the smart grid by providing valuable, real time information about the panels and distribution system.
- Distribution line losses – the electricity lost as it is moved – are reduced because the panels generate power close to where it's needed.
- The panels can be installed quickly and simply on existing poles and begin to generate power immediately. This ease and flexibility means that Halton Hills Hydro can expand incrementally as it sees fit.
- Having the panels dispersed throughout the community also helps manage the variable nature of solar power. It is easier for the distribution system to manage small changes in output from individual panels than it is to manage a change in generation that can occur with one large solar installation.

The project demonstrates that smaller communities can move forward with viable renewable energy projects which fit with the character of the community.

Power generated by the panels is distributed directly to customers and does not have an impact on the Global Adjustment – the portion of the electricity bill which covers the higher rates paid out through FIT contract.

Ratepayers will benefit from clean power and improved smart grid. The investment will have an estimated ratepayer impact of less than \$1 per year, per customer, with long-term benefits expected from improved efficiency and monitoring.