

# EnerWorks

## Drake Landing Solar Community

Application: Residential or Commercial Seasonal Heat Storage

### Features:

- 90% of space-heating needs met by solar thermal
- 5.5 tons (5 tonnes) of greenhouse gas emissions reduced annually **per home** (a total of 286 tons/260 tonnes)
- 800 EnerWorks collectors capturing 1.5 MW (5 MMBTU/hr) of thermal power on a typical summer day
- An EnerWorks two-collector residential appliance on each home provides domestic hot water
- First residential solar community in North America



Aerial view of completed solar community



Drake Landing Solar Community homes collect solar energy with two EnerWorks solar collectors for domestic hot water.

The Drake Landing Solar Community is a 52-home subdivision that uses the sun's energy to supply 90% of space heating and up to 70% of domestic hot water needs. The system uses 800 commercial solar collectors in conjunction with seasonal storage to store the sun's energy during the summer, and distribute heat to the homes in winter as needed. A two-collector residential solar water-heating appliance is installed on each home to provide solar hot water year-round.



Solar collectors mounted on roofs of detached garages for district heating

### Site Specifications

Name of Property:	Drake Landing Solar Community
Location:	Okotoks, Alberta, Canada (just south of Calgary)
Type of Property:	Residential subdivision
Operation:	Year-round ground-mass heating with seasonal storage
Displaced Heating Fuel:	Natural gas
Solar Collectors:	<ul style="list-style-type: none"> <li>• 800 solar collectors for district heating mounted on roofs of detached garages</li> <li>• 2 solar collectors on each home for domestic hot water</li> </ul>
Seasonal Storage:	144 boreholes, reaching depths of 115 ft (35 m); a community park sits on the surface of the borehold field
Solar Energy Uses:	<ul style="list-style-type: none"> <li>• Space heating</li> <li>• Solar domestic hot water</li> </ul>



# EnerWorks

## Confederation Place Hotel, Kingston Waterfront

Application: Hotel, Motel, Conference Center, Institutional Residence



Confederation Place Hotel on the historic waterfront in Kingston, Ontario. Solar collectors can be seen at right, on top of hotel conference center.



Galvanized C-channel racking system holds collector modules at optimal tilt of 45°.



EnerWorks Commercial Energy Pack, plumbed into two 100-gallon storage tanks. Energy Pack transfers heat from collectors to water in storage tanks. Pre-heated water enters auxiliary water tanks when hot water is drawn.



Secondary heat exchanger provides solar-heated water to seasonal outdoor pool.



A heat meter monitors flow, temperature, and performance information, including amount of solar energy collected.



Flow meter used to determine amount of energy produced.