Okotoks, Canada

In Okotoks, Alberta, in Canada, 52 energy-efficient detached houses are supplied with a small low-temperature district heating system. Heat is supplied with 2,293 m² solar collectors located on garage roofs, plus natural gas-fired peak load boilers. Both seasonal storage (boreholes) and short-term storage (water tanks) are used. The system supplies the houses with space heating only; DHW is produced independently with solar collectors with back up gas-fired water heaters. This allows for a very low district heating supply temperature.

Table 1. Measured values from July 2011 to June 2012.

Parameter	Value
Year of construction	2007
New development/renovation	New development
Type of houses	Detached houses
Number of houses	52
Supply temperature (design/measured)	37-55 / 40 °C
Return temperature (measured)	32 °C
Distribution losses	5 %

Supply-side technologies

- Solar collectors
- Natural gas-fired boilers.
- Borehole, seasonal storage
- Short-term storage: water tanks.

Demand-side technologies

- Forced-air heating.
- DHW produced independently with solar collectors and gas-fired water heaters; not connected to the district heating system.