



Energy Report Summary for December 2007

Prepared for:



Natural Resources
Canada

Ressources naturelles
Canada

Canada

Prepared by:



*Science Applications International Corporation
(SAIC Canada)*

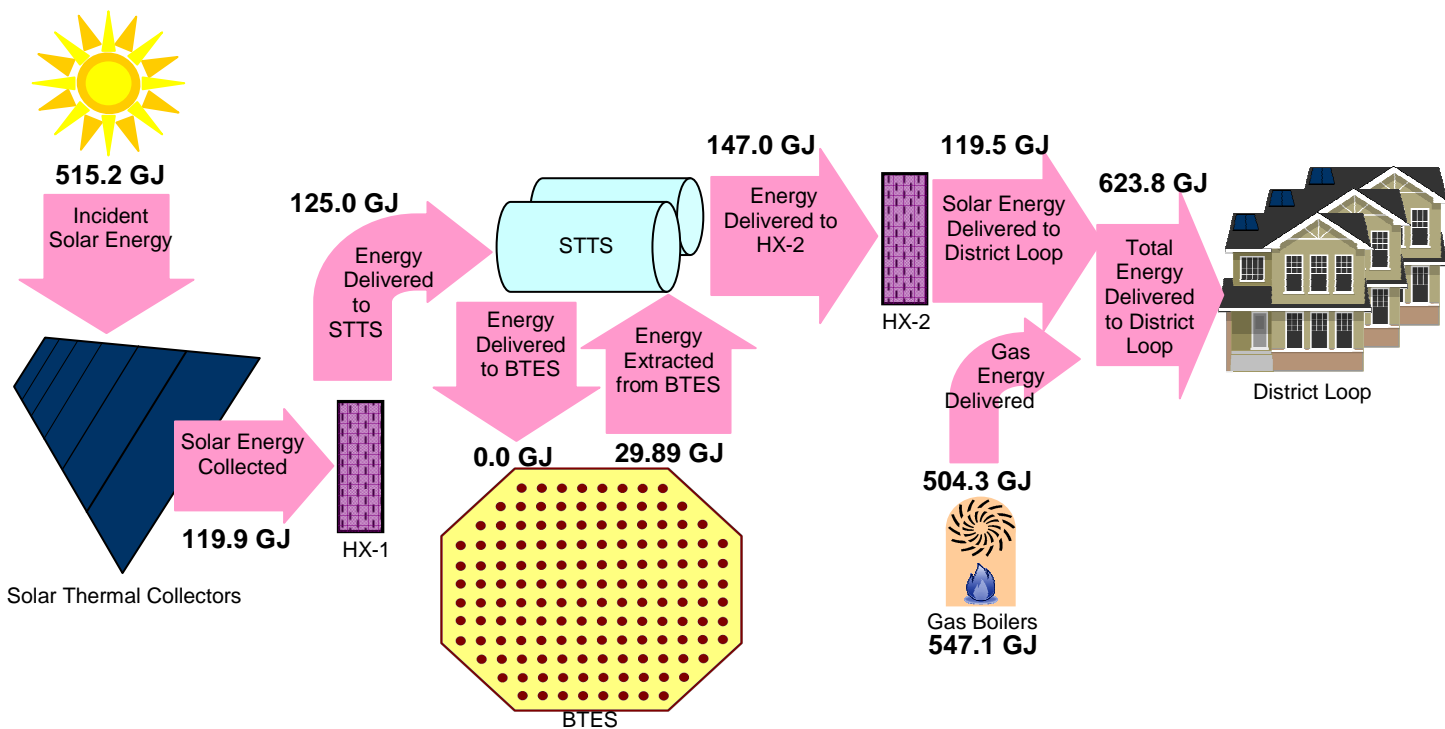
12 March 2009
Document Version 5.0
CM002171

PROPRIETARY

Drake Landing Solar Community Energy Overview for December 2007

This document summarizes the energy generated and used within the Drake Landing Solar Community at Okotoks Alberta.

Additional Information may be found here: <http://www.dlsc.ca>



System Energy Diagram

Summary for December 2007		
Description	This Month	Since July 1, 2007
Total Incident Solar Energy for the month	515.2 GJ	6643 GJ
Total Solar Energy Collected for the month ¹	119.9 GJ	2539 GJ
Total Solar Energy Delivered to STTS for the month	125.0 GJ	2605 GJ
Total Energy Delivered to BTES for the month	0.0 GJ	1593.0 GJ
Total Energy Extracted from BTES for the month	29.89 GJ	120.0 GJ
Total Energy Delivered from STTS to HX-2	147.0 GJ	1159.0 GJ
Total Solar Energy Delivered to District Loop for the month	119.5 GJ	671.9 GJ
Natural Gas Energy Used	547.1 GJ	675.6 GJ
Boiler Thermal Energy Delivered to the District Loop for the month	504.3 GJ	632.6 GJ
Total Energy Delivered to District Loop for the month	623.8 GJ	1304.4 GJ
Average Solar Collector Efficiency for the month	23.3%	38%
Average Efficiency of HX-1 for the month	104%	97%
Average Efficiency of HX-2 for the month	81.3%	58%
Average BTES core temperature for the month	33.95 °C	40.61 °C
Average BTES core temperature at start of month	35.66 °C	42.89 °C
Average BTES core temperature at end of month	33.03 °C	41.02 °C
Change in average BTES core Temperature during the month	-2.63 °C	-1.87 °C
Electrical energy used for the month	21.93 GJ	92.92 GJ
PV energy generated for the month	0.487 GJ	3.82 GJ
Net change in energy stored in STTS during the month	-2.90 GJ	-21.33 GJ
Solar Fraction	19.2%	52%

¹ Corrected for glycol concentration variance