

## CASE STUDY: CENTERTOWN

### Overview



Located in the Northern California town of San Rafael is Centertown, the affordable sixty unit apartment complex built by non-profit housing developers BRIDGE and EAH Housing, with well over 17,000 homes to their names. In January 2008, when management decided to install solar hot water at Centertown, they called Sun Light & Power (a certified Heliodyne trade ally, known as a Helio-Partner) to have them install a Heliodyne system.

After reviewing the energy requirements for the building, they installed a system (comprised of 14 Heliodyne GOBI 410 collectors, divided into 3 separate arrays) which now provides hot water for all 60 apartment units. The system uses a heat exchanger to transfer the heat from the collectors to the solar storage tank which provides hot water to the residents. Backup heating was also taken into consideration (for times when there is little or no sun) by using 3 existing gas water heaters.



*"BRIDGE is very pleased with the first-year performance of the solar thermal system installed at Centertown Apartments. The annual savings produced by the system will help us to sustain our mission of providing quality homes at affordable rents to our residents."*

*Lydia Tan, Interim President and CEO*

*"Clean, renewable energy at Centertown is an important step to creating an environmentally and economically sustainable downtown San Rafael. EAH Housing is committed to enhancing the sustainability of our interconnected local — and global — communities."*

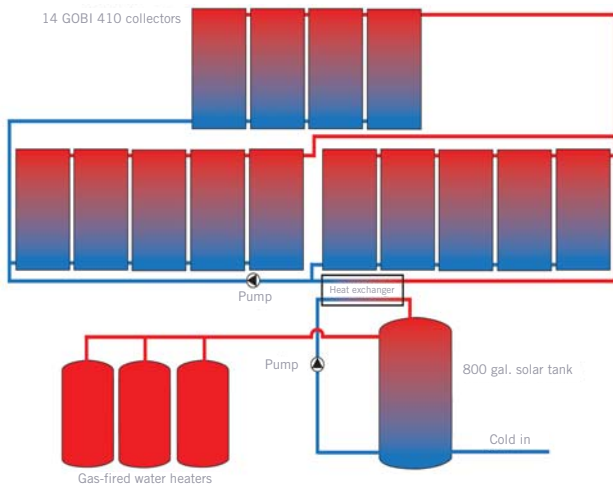
*Laura Hall, COO, EAH Housing*

Because the apartment complex is owned by a non-profit organization with no tax liability, the 30% federal tax credit could not be utilized. However, even without the advantage of incentives, return on investment (ROI) for the solar hot water system will be just over 9 years at the current price level for natural gas.

With a life expectancy of 25 years or more, Centertown can expect many years of reliable performance, helping to save not only money, but also the environment.

## System Description

Sleek Heliodyne GOBI 410 solar collector panels line the roof of Centertown for optimum solar exposure. There are a total of 3 arrays: two 5-collector arrays, and one 4-collector array, totalling 14 collectors. Inside each collector are thin metal tubes filled with a special non-toxic solar fluid. When heated, the solar fluid is circulated from the collectors through a heat exchanger, which transfers that heat to an 800 gallon solar storage tank filled with water.

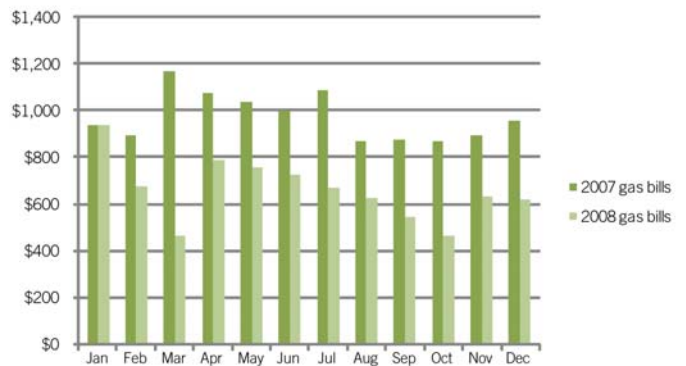


## KEY NUMBERS AT A GLANCE

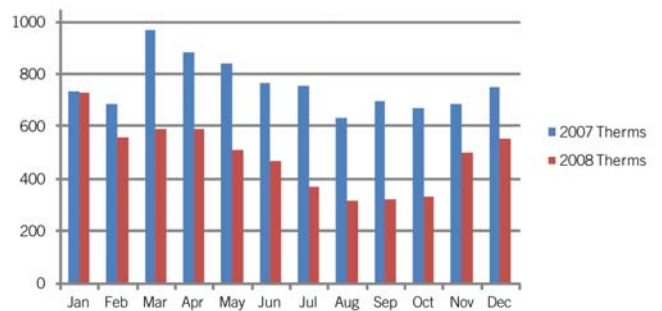
System cost (equipment + labor)	\$51,000
Total therms billed 2007 (before system installation)	9078 therms*
Total therms billed 2008 (after system installation)	5827 therms*
Expected average annual utility savings	<b>\$5,364</b>

Expected average therms/year saved	3,000
Equivalent annual output	39,379 kWh
Equivalent annual CO <sub>2</sub> reduction	47,255 lbs

Energy cost comparison between last year w/o SHW, and first year with SHW



Energy usage comparison between last year w/o SHW, and first year with SHW



\* Energy usage and costs for 2007 and 2008 obtained from actual monthly utility bills of the apartment complex

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