

# Hot water from the sun a money saver for condo owners

## More info

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Breckenridge condos think big with solar retrofit

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Longbranch Condominiums in Breckenridge unveiled its solar thermal supplemental hot water system Wednesday — the largest in Summit County.

Among photovoltaic and solar thermal installations in the county, this one is the most powerful, Mech Tech president Mark Stearns said. He touts the system's ability to produce four times more energy per square foot than a photovoltaic array through solar thermal's transfer of solar energy into hot water instead of electricity.

The Longbranch project began in 2006, when the homeowner's association was eyeing a building renovation. Arapahoe Architects owner Bobby Craig encouraged them to consider what his wife and partner, Carol, called a "holistic approach" to the renovation. He wanted them to identify what else the building might need in coming years aside from new siding, windows and lighting.

"This was one of them," Bobby Craig said, referring to the solar thermal system, which provides about 75 percent of the building's 60-unit residential hot water. Excess hot water supplements the pool, sauna and hot tub.

Three companies partnered to create the 28-panel Longbranch system — Mech Tech, RE-Align and Sunshine Solar — at a cost of \$104,000.

Stearns said the building was going to need new boilers in the pool's mechanical room, which prompted the homeowners association to consider the solar thermal option.

"A lot of money was going to be spent in this room," he said.

The homeowners association also looked at photovoltaic and geoechange (too expensive, Bobby Craig said). They removed the in-house boilers and instead installed the rooftop system that's tied into heat exchangers.

"It all comes back to value," Bobby Craig said. "What's going to save them the most money on the investment?"

Carol Craig said the broad approach to renovations is a specialty of Arapahoe Architects, as they have the goal to make a building "more beautiful and more efficient."

"It's overwhelming for people," she said, referring to energy upgrades. "If you do it the right way, you save money in the long run."

Bobby Craig said making energy upgrades isn't hard, nor does it have to be costly.

The Longbranch system has a five-year payback period. The homeowners association took a line of credit, which will be paid back with money already set aside to pay utility bills. The system has a 20-year life expectancy that should see a total of \$400,000 savings in that time.

"They'll save enough money on gas each month to pay the loan," building manager Kim Beres said. Energy savings are estimated at about \$20,000 per year. Beres added that, aside from the zero out-of-pocket costs residents face, a \$500 tax credit per homeowner and a Governor's Energy Audit rebate of \$15,000 will also come their way. Another solar thermal system at Summerwood was installed to handle snowmelt and the pool. It had a three-year payback.

A similar system for a residential house would cost about \$7,000 with a payback of about seven years and run up to about \$20,000 for whole-house heat, Stearns said.