

Going Solar to Keep the Pool Comfortable

Panels Save on Energy Costs but Can Have Their Own Challenges

By MARCELLE S. FISCHLER

JAMIE DeLUCA won’t swim in the free-form in-ground pool at her family’s home here unless the water is close to 80 degrees, warm enough “to just be able to walk in,” said Ms. DeLuca, 21, a junior at Stony Brook University.

“I’m spoiled,” she admitted.

Left to the whims of the weather, outdoor pools in the New York metropolitan area are slow to warm up, typically not reaching the high 70s, what most people consider a minimum temperature for swimming, before mid-June or even July.

Jamie DeLuca and her sister, Crystal, 22, don’t like to wait that long. Last year, their father, Patrick J. DeLuca, opened the pool in April, paying \$500 a month nearly all season to heat it with gas. Even at that price, however, Mr. DeLuca, a legal consultant, “only heated the pool when the kids were going to go in it,” he said.

His strategy didn’t stop the whining.

“It would take two days to heat up,” Jamie DeLuca recalled.

This summer, with fuel prices skyrocketing, Mr. DeLuca realized heating the 16-by-32-foot pool could cost \$800 to \$900 a month. So he invested \$4,600 in a solar pool heating system.

On a recent afternoon, Mr. DeLuca watched as a worker from Sunshine Solar Technologies in Jericho, N.Y., which installs solar systems to heat pools and domestic hot water, mounted eight collector panels of skinny black tubes on the roof of his house.

The system took about five hours to install. Using the pool’s existing pump and filter, it circulates the pool’s 15,000 gallons of water through the solar panels, raising the water temperature 10 to 20 degrees without incurring any additional energy costs.

Capturing the sun’s rays to heat the pool now “made absolute sense,” said Mr. DeLuca, who first investigated the possibility two years ago.

The system is eligible for a 15 percent solar incentive rebate, capped at \$1,500, available to National Grid gas customers in New York until the end of 2008, said Diana L. Parisi, a spokeswoman for the company.

Mr. DeLuca estimates that at current rates he could recoup the cost of the system in a season and a half. His gas heater is still part of the loop, however; he will use it to boost the temperature of his hot tub close to 100 degrees and to supplement the solar heat, if necessary.

Sunshine Solar Technologies has orders to install two systems a day through September, according to Kevin Wert, the company president; business has more than doubled since last year.

According to Monique Hanis, a spokeswoman for the Solar Energy Industries Association, a trade group, pool heating accounts for the largest number of solar installations in the United States, outpacing domestic hot water and solar electric systems. There were 33,000 solar pool heating systems installed nationwide in 2006, compared to 24,000 in 2002. Solar



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WARM IT UP

Patrick DeLuca inspects solar panels on his roof in South Amityville, N.Y., top, and learns to operate the system with Kevin Wert.

pool installations grew at an average rate of 8 percent during the last four years, according to the association.

Dave Sizelove, president of Aquatherm Industries in Lakewood, N.J., a manufacturer of solar pool heating systems, said the “pain of a cold pool or the pain of a high heating bill” is driving pool owners to solar technology; according to Loren Brown at P.K. Data, a market research company in Duluth, Ga., 40 percent of in-ground pool owners and 10 percent of above-ground pool owners already heat their pools. April sales at Aquatherm were up 21 percent compared to the same month last year.

Bob Griffin, owner of SolarSwim Pool Heating Systems in Somerset, N.J., said that when the panels are warmer than the pool water, the system, which is regulated by a thermostat, turns on automatically. “Most people put it up to 88 or 90. There is no cost to run it,” Mr. Griffin said.

Systems run from about \$3,000 for a round above-ground pool 18 feet in diameter to \$5,000 to \$6,000 for a 16-by-32-foot in-ground pool and \$6,500 for a gunite or vinyl in-ground pool that is 20 by 40 feet or larger, Mr. Wert said. The number of solar panels needed is around 65 percent of the pool’s square footage, which translates to 500 square feet of panels for an 800-square-foot pool. Shady and windy areas require more solar collectors.

A bill introduced in the New Jersey Legislature in January by Senator Robert W. Singer would require customers who use fossil fuels to heat a pool to also install a solar heating system with collector panels equal to 25 percent of the pool’s surface area.

The technology has remained essentially unchanged since 1976, said Don Harter, who



started building solar pool heating systems that year at Harter Industries in Matawan, N.J. Lines to buy gas were long and concerns about fuel supplies encouraged the use of alternative energy sources. “We pioneered a very durable type of construction,” Mr. Harter said, one that was also amenable to do-it-yourselfers. His own pool is still warmed by a solar unit he installed in 1978.

The orientation of a house can affect the system’s efficiency

Robert DeFeo, a retired elementary school teacher from Greenburgh, N.Y., had 11 solar collectors installed on the roof facing his pool last summer; he said they were undetectable to passers-by. He was fed up with his gas heater, which “needed maintenance — parts broke down on it,” he said, and the pilot light went out during storms. For \$5,000, which he said was about \$1,500 more than the cost of a new gas unit, “it didn’t make sense to install the gas heater and then have gas bills.”

But solar panels aren’t a panacea for every pool owner. Aesthetics can be a deterrent, and about 30 percent of homes are situated in a way that is not amenable to using solar panels, said Gerald Falbel, owner of Optical Energy Technologies, a solar pool heating supplier in Stamford, Conn.

Shady lawns pose a problem, and pumps can be too far from the roof. “You need at least six hours of unshaded illumination,” Mr. Falbel said. Panels should ideally face south, slightly tilted toward the sun. “If you face east or west, you lose 20 percent,” Mr. Falbel said.

Russell Diamond, 38, the manager of a clean energy investment fund, had a solar heating system installed on the roof of his pool house in Westport, Conn., two years ago. When he stuck his hand in the water after the panels were installed, though, he found that “it hadn’t raised a degree.”

The pool house didn’t have enough sunny roof area for the necessary collector panels, and Mr. Diamond didn’t want to use a ground mount or sacrifice shade.

“Cutting down trees in order to achieve solar wasn’t necessarily a great setup,” Mr. Diamond said. The panels were taken down.