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## THE PRESS Residence

# When a Green Pool Is a Good Thing

By Jennett Meriden Russell

Years ago, having a green swimming pool would have been nothing to brag about since, at that time, green brought up images of moss, mold and slimy algae in the water. But in today's world of solar technology, green is the way to go when it comes to heating a swimming pool.

Solar-heated pools can extend the swimming season by as much as six weeks each summer while eliminating the hefty cost of gas or electricity with a conventional pool heater. Turns out that solar pool heaters can also be surprisingly inexpensive and relatively easy to install.

A solar pool heating system costs between \$2,000 and \$10,000 to buy and install, depending on size. According to the U.S. Department of Energy, solar heating systems can provide a return on investment anywhere between a year and a half and 7 years, depending on the cost of the auxiliary energy being displaced.

Solar water heaters can be used to heat both swimming pools and spas. In a standard solar pool heating system, the existing pool filtration system pumps cool water through a solar collector—which is typically a twisting tube that runs through black panels—which is typically located on a nearby roof. The heat-

ed water is then transferred back into the pool.

Additionally, maintenance is minimal for solar pool heating systems. The only moving part on the system is the diverting valve, which controls when the water circulates through the heat-collector loop.

Solar pool heating collectors operate just slightly warmer than the surrounding air temperature and typically use inexpensive, low-temperature heat collectors made from specially formulated plastic materials. Indoor pools, hot tubs or spas in colder climates typically have glazed (glass-covered) solar collectors.

Greg Darvin, owner of Pristine Pools in East Hampton, said he uses a high-tech version of solar panels to heat his pools. The solar panels he uses can create electricity rather than just heat water. Mr. Darvin said these photovoltaics—which produce electricity from sunlight—serve two purposes: heating a pool during the summer months and heating a home during the winter months.

"With a photovoltaic system the power is being sent to your house, which would have an electric heat pump sys-



Saltwater treatment systems, like the one at work maintaining this pool in Amagansett, are among the alternatives now available for swimming pools.

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# WATER: Green Solutions Abound To Heat and Maintain Your Pool

tem installed," Mr. Darvin said. "That heat-pump system is basically an air conditioner, but it does just the opposite by taking ambient air temperature and making it warmer and giving off cold as its waste material... Whereas an air conditioner is compressing air and making it colder and giving off heat as its waste material."

Mr. Darvin said that the electricity created by the photovoltaic system could also be sold back to the Long Island Power Authority (LIPA) when the solar panels are not heating the pool in the summer months.

According to the LIPA website, the power company also offers rebates for the installation of photovoltaic systems in LIPA's service territory. Rebate availability is on a first-come, first-serve basis, based upon application, and pre-approval by LIPA.

Direct incentives include a rebate of \$3,500 per kilowatt of installed equipment. Pre-approval applications are free, but incentives are capped at 10 kilowatts, according to the LIPA website.

"Things are set up for photovoltaics to be attractive," Mr. Darvin added. "LIPA gives a healthy rebate, there's also nice federal and state tax credits, so, from an economic standpoint I think it makes more sense to explore photovoltaics as a pool heating system."

The downside to high-tech solar panels is that the photovoltaic industry is in financial hot water. It recently received a hefty federal tax bailout to survive. However, in January, Congress specifically excluded standard solar swimming pool heating units from the tax credit in its massive bailout bill because solar swimming pool heating is already cost-effective and doesn't need a federal bailout.

Due to its design, a standard solar swimming pool heater directly transfers solar energy to heat the pool water. As a result, it is 10 times as cost-effective and carbon dioxide reducing per dollar of investment as compared to a solar electric photovoltaic system.

In residential applications, heating a swimming pool with solar energy typically requires a solar collector that is 50 to 100 percent of the surface area of the pool, according to information obtained from the Department of Energy.

A standard solar swimming pool heating system, which can last for 20 years, will pay for itself from the savings in gas or electricity in as little as 3 years, according to the Department of Energy. The negative impact of solar-heated pools is those homeowners generally have to install large black panels on their roofs.

However, Patrick Kenney, owner of Long Island Solar Pools of East Moriches, is pitching a new roof solar heating technology known as SolarAttic. This technology uses hot attic air to heat a pool.



A saltwater treatment system is used to maintain this modern pool at home on Oak Lane in Amagansett.

ELIZABETH GLASGOW.

"Not only is it more cost effective, more importantly it is out of sight," Mr. Kenney said, noting the SolarAttic unit is installed inside the attic, not on the roof. "The standard solar heater collectors are a fantastic product. But they just don't look that good."

Mr. Kenney said SolarAttic sucks all the hot air out of the attic and uses it to heat pool water. He noted that the result is two-fold, a warmer pool and a cooler attic.

The cost to install the SolarAttic is on par with a standard solar pool heater—around \$6,000. The system is roughly the size of a small refrigerator and can be installed inside an attic in one day, Mr. Kenney said.

According to SolarAttic manufactur-

er specs, it generally will cost a homeowner \$10 to \$15 a month in electricity to operate the pumping system, which draws water from the pool and runs it into the SolarAttic heat exchanger located in the attic.

For those who do not have the money for either pool heating system, there are pool cover options that significantly reduce heat loss and help maintain warm temperatures for long periods. Solar pool covers can cost under \$100, but size and quality will raise that price. Putting in a dark or even black pool liner can also bump up the temperature slightly, but Mr. Kenney advised the rise in temperature is not worth the loss of esthetic value for those who want a bright blue pool.