

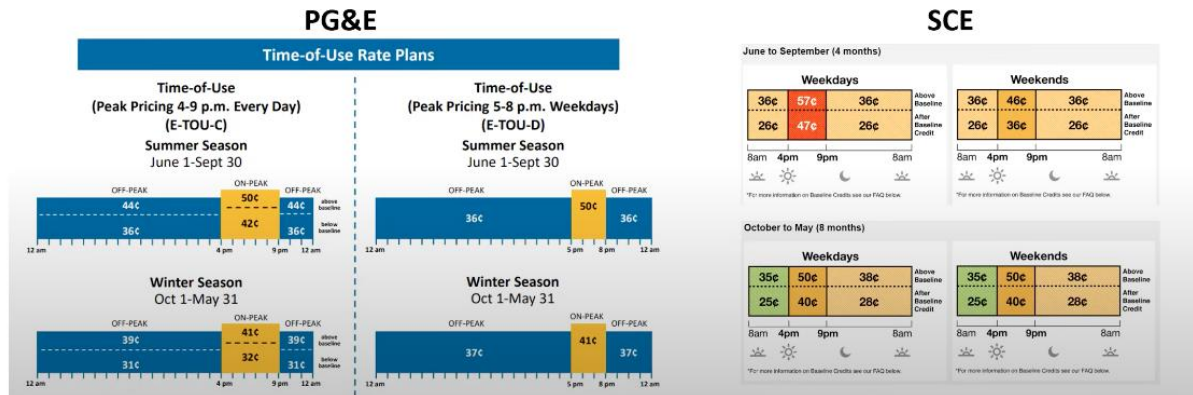
How To Reduce Your Swimming Pool Operating Costs

By Frank Scotti – Solarponics – June, 2023 5 MINUTE READ

Being a swimming pool owner should be an enjoyable experience. You should not have to think of your pool as a money sink hole. That’s why I am sharing four relatively simple and cost-effective steps a swimming pool owner can take to reduce energy, save money, and add comfort. Those four things include; setting your pump to run during the cheapest energy hours, install a variable speed swimming pool pump, install a heat pump water heater, and switch to a salt-water chlorinator. Sound complicated or expensive? It’s not. Start here.

TIME-OF-USE

Be aware of the cost of energy at different times of day. Typically, there will be a peak time where energy costs are extremely high. For PG&E customers, peak rates are between 4PM and 9PM. Energy costs at peak hours costs \$0.50 per kWh as of June 2023. Non-peak energy rates are \$.36 per kWh. Running your pump during only non-peak hours is a solid strategy. For example, set your pool pump timers to start at 8AM and stop at 4PM, for an 8-hour pool pump run time. For a 12-hour run time, set the start time to 4AM and stop time at 4PM.



POOL PUMP

The next thing you can do is invest in a variable speed pool pump vs. an older single speed pool pump. A pool pump is your main source of ongoing energy costs, so it is important to maximize efficiency

A single speed pool pump is an induction motor that runs at a single speed, typically at a high start-up speed, more than is necessary once the pump is primed. A variable speed pump is a permanent magnetic motor that has a high efficiency rating. Shown at right is the Pentair Intelleflo3 Variable Speed and Flow Pool Pump. I saw about an 80% savings after I installed the Intelleflow3.

A variable speed pump can ramp up to 3450 RPMs at startup, and power down to as low as 500 RPM for continuous operation, saving on average of 80% in energy use, with annual energy savings of about 75% on average.



Variable speed pool pumps are also quieter, as low as 45 decibels, about four times quieter than traditional pumps, an added bonus.

The Pentair IntelliFlo also comes pre-programmed with eight speed settings and a build-in timer to ensure the pump runs at optimum speed and duration.

POOL HEATING

When it comes to pool heating, electric heaters are the most expensive and inefficient. Gas pool heaters are more efficient over electric. However, with skyrocketing gas costs, gas-powered pool heating is becoming less popular. In addition, gas is not a sustainable resource.

A heat pump water heater is currently the most energy efficient, cost-efficient, and resource-efficient pool heater on the market. A heat pump pool water heater is about the size of a home air conditioning unit. The unit extracts heat from the air to heat water, with cold air as a by-product, making them four to seven times more efficient over gas water heating. The energy needed to run a heat pump pool heater can also be 100% offset with solar energy. Heat pumps also last longer.



Gas pool heating pumps cost around \$200 to \$400 per month to operate vs. \$100 to \$200 per month for a heat pump pool heater with the same results. A heat pump pool heater's 10-year energy savings can exceed \$13K.

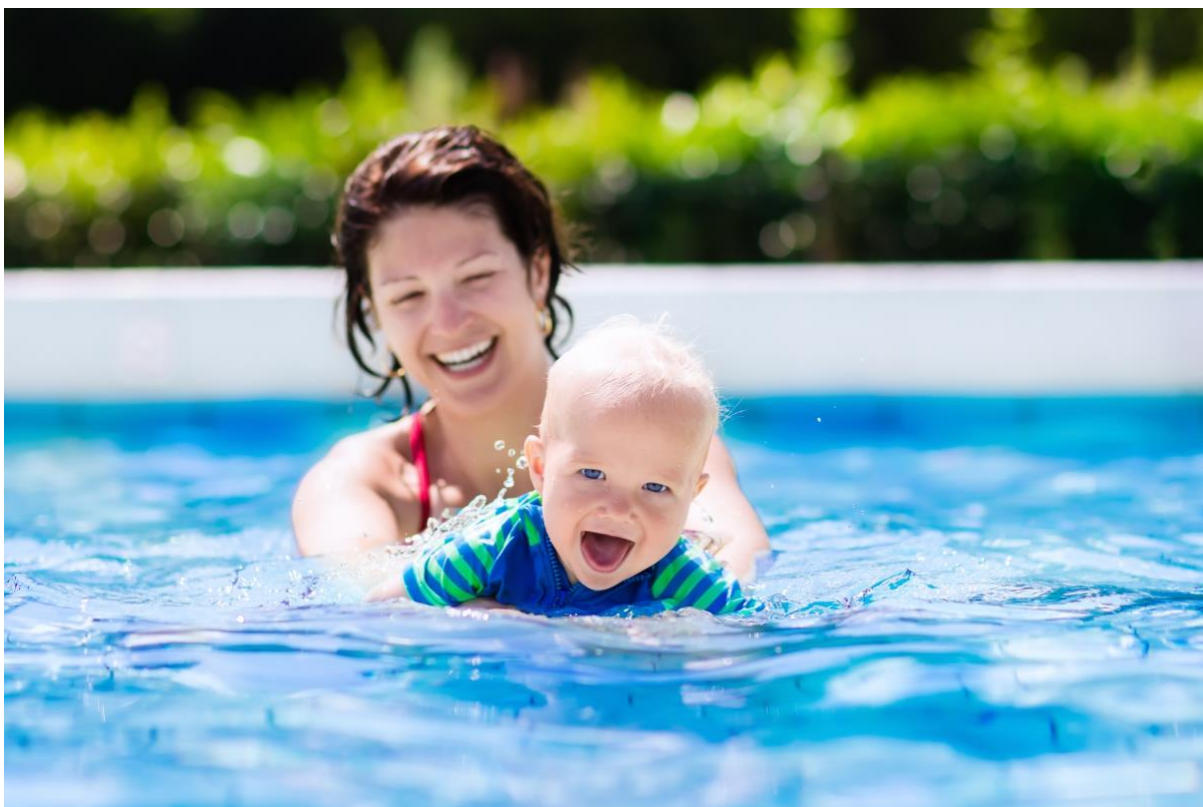
As with anything, however, there are some tradeoffs. Heat pump pool heaters heat slower. They typically need a 40 to 50 amp power source. Heat pump water heaters do not work well in low temperatures (<45 degrees). However, to be fair, heating a swimming pool when it is 45 degrees outside will cost a bundle using any energy source. So, typically homeowners winterize their pools in the colder months, turning off heaters and reducing pump run time, saving energy and money.

SALT-WATER CHLORINATOR

A lesser-known way to reduce costs, and add comfort is to install a salt water chlorinator. A salt water chlorinator uses salt to make pure chlorine, eliminating the need for harsh chemicals. After the chlorine has disinfected your pool, it reverts back into salt and the cycle repeats.

Salt water pools don't irritate the eyes or skin and there is no smell or odor. Swimsuits and towels will not get bleached out by the natural chlorine. Salt water chlorinators are also affordable and easy to install.





The average sized swimming pool uses about 100lbs. of chlorine (tablets or granular) every year, costing roughly \$700 per year. The payback is about four years. However, the added comfort is priceless.

Rebates and incentives seem to come into and out of play throughout the year for heat pump water heaters and variable speed pumps. Always search available rebates before making any purchase decision. Several sites track and list existing rebates. They include; theswitchison.org, pge.com, energy.gov, sce.com, energycenter.org.

If you live on California's central coast and one of these technologies makes sense for your situation, visit solarponics.com or call Solarponics at (805) 466-5595 for more details and to get a free quote. Until then, have a happy and safe swim season.