

Calculate Pond Electricity Usage

What is the cost of electricity to operate my pond pumps?

This is a question people rarely think of when they are building a pond, or having it built by a contractor. Since Koi ponds run 24/7, you need to consider this in purchasing the most efficient pump in terms of electrical usage. From your High School Physics class, you know Watts = Volts x Amps. Multiply the number of Watts by the number of hours in a month and you'll be able to calculate the number of Kilowatt hours used by the pond.

Most pumps have the specifications listed on the label of the pump motor. For example, a typical Lim Wave 1/4 hp pump uses 3.0 amps. Electricity for the month (figure 30 days average) is:

$$3.0A \times 115V = 345 \text{ Watts/hour}$$

$$345 \text{ W/hr} \times 720 \text{ hr/Month} = 248\text{kW hours}$$

$$248\text{kW Hours} \times \$0.12/\text{kW Hour} = \$29.76$$

This is based on a cost of electricity of \$0.12 per kilowatt hour. Your cost may vary depending on usage, and it looks like costs are going up. A simplified way to calculate this would be to take the number of amps and multiply by \$10 per month for a close approximation. Add in the cost of your UV light (Watts x Hours per month x cost of kW hours), and you know what portion of the electric utility bill is dedicated to your pond. You can see by this why it is critical to choose the most efficient pump for your given pond size and filtration requirements.

