

Kiln Firing Cost

I've done several calculations using a meter on the line to learn exactly how much power is used. The most important thing I learned is that it takes a lot less than most people think. I prefer to do all my estimates on the high side and use the highest likely figure. Each firing will be a little different, but it's safe to assume a fusing/slumping firing will not draw power more than 20% of the time the kiln is on and safe to assume an annealing firing will not draw power more than 40% of the time the kiln is firing. To calculate how much power your kiln consumes, you can use the following formula.

Watts x Cost/kilowatt hour x Time on x Percentage

Watts is calculated by multiplying voltage times amperage. (for example, a 15 amp 120 volt kiln is 1800 watts)

Cost is the figure per kilo watt hour shown on your electric bill.

Time is the time your kiln is on. For both annealing and fusing/slumping firings, it's reasonable to assume the kiln is on for 8 hours. The remainder of the time the kiln is turned off and just cooling to room temperature.

Percentage is the allowance for the percent of the firing time the kiln is actually drawing power. Even at a high temperature, a kiln doesn't draw power constantly but turns off and on intermittently

As an example:

For that 15 amp 120 volt kiln used for a fusing project where the electricity costs .07/kilowatt hour the cost per firing would be:

$1800 \text{ watts} \times .07/\text{kwhr} \times 8 \text{ hrs} \times 20\% = 20 \text{ cents.}$