

Energy Usage at Home: What is a Kilowatt Hour?



This flyer explains what a kilowatt hour (kWh) is, how it is calculated, and why it is important. You can access Ealing Council's other retrofit guides by the [Council's website](#).

What is a Kilowatt Hour (kWh)?

A kWh is a measure of energy. It tells us how much energy is being used to power domestic appliances over a period of time in the home. Your electricity meter counts kilowatt hours you use.

How is a kWh Calculated?

The kWh value of an appliance is calculated by multiplying its power rating (how much energy is needed for the appliance to work), in kW, by the duration of time it is powered for, in hours.

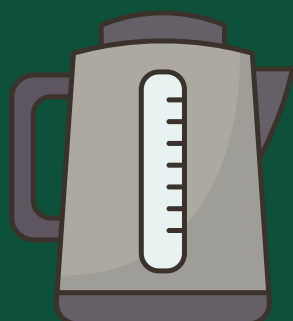
Each household appliance requires a different amount of energy to run, this is why each appliance has its own kWh value.

The power rating of a domestic appliance is often found at the base of the appliance, either on a white sticker or printed onto the appliance itself.



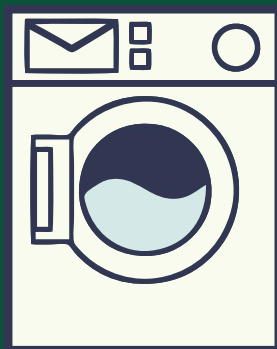
Toaster

Around 1.2 kilowatts to power, multiplied by the time that the appliance is used for, 0.5 (half an hour). This gives you a kilowatt hour value of 0.6.



Kettle

Around 2-3 kilowatts to power, multiplied by the time that the appliance is used for, 0.75 (45 minutes). This gives you a kilowatt hour value of around 1.5-2.25.



Washing Machine

Around 2.1 kilowatts to power, multiplied by the time that the appliance is used for, 3.0 (three hours). This gives you a kilowatt hour value of 6.3.

*Please note that these figures are average kW values of UK appliances and should be viewed as a guide. Domestic appliances often have different settings, impacting the actual kW required to power them.

Why is a kWh Important?

We can use the kWh value of an appliance to calculate how much money it costs to run, in the same way that our energy bills are calculated. We simply multiply the kWh value of an appliance by the cost per unit of electricity charged by our energy provider.



To make this simpler, you can purchase a plug-in device to monitor your kWh usage at home and track your domestic usage.

Understanding the amount of energy we use at home, and how we can reduce our energy demand, can help to protect us from rising prices.



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