

## Understanding Kilowatt Hours (kWh's)

### What is a Kilowatt?

Energy bills have a language all of their own and how many people really understand what a Kilowatt is, or how Kilowatt Hours (kWh's) work? A Kilowatt is simply a thousand watts. Watts are a basic unit of energy and all electrical items are measured in watts. All electrical items will say on them how many watts they use.

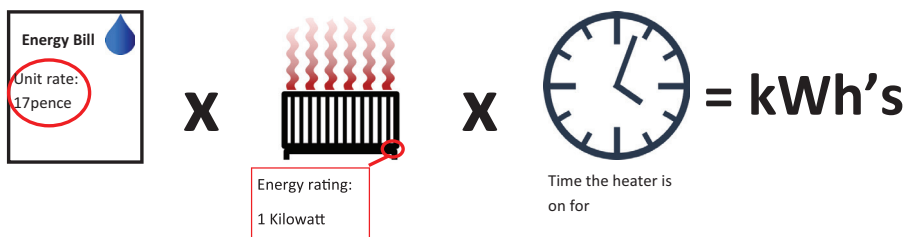
### How do Kilowatt Hours work?

Energy is measured in hourly units. If you use an electrical item for one hour, then you will have used some form of Kilowatt Hour. To understand how much energy you have used, you simply multiply the Kilowatts by the number of hours in use.

### Confused? Let's look at some real world examples

#### FOCUS ON... portable heater

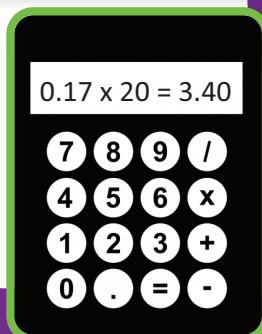
You have a portable heater that is rated at 1 Kilowatt. If you run that portable heater for 1 hour, then you have consumed 1 Kilowatt Hour. Let's say your energy rate (found on your energy bill) is 17 pence per Kilowatt Hour. That means running the portable heater for one hour costs 17 pence.



Let's say that you have your portable heater on for five hours a week, that means your heater is on for 20 hours per month.

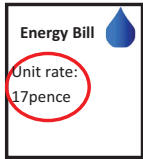
You have therefore used 20 kWh's of electricity that month, which you multiply by 17 pence. This would equal £3.40 of energy used per month to power your portable heater.

When calculating using pence, you should put a decimal point in front of the number. In this case 0.17, as it is 0.17 of a pound, or a 100. If you just put 17 into your calculator, then you would get 340.



## FOCUS ON... living room lights

In your living room you may have two 100 watt light bulbs in the ceiling. Remember that a Kilowatt is a thousand watts, and so two hundred watts used for one hour would be 0.2 Kilowatt Hours. Our Kilowatt Hour rate is still 17 pence, which means for every hour your lights are on they cost 3.4 pence.



100 watt x two

X



Time the light are on

= kWh's

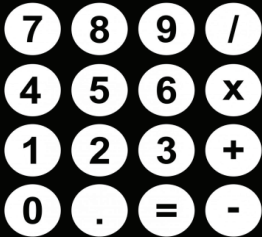
Let's say that you have your living room lights on for 5 hours a day.

This would equal 35 hours a week and 140 hours a month.

This would mean that the lights are consuming 28 Kilowatt Hours in a single month.

Multiplied by 17 pence, these lights are costing £4.76 to run.

$$0.17 \times 0.2 \times 140 = 4.76$$



## The value of understanding Kilowatt Hours

Understanding Kilowatt Hours will help you to understand how much energy you are using in your home. It will help you to understand how your bill works. It will also help you to understand how much energy you can save in your home, by turning things off, or switching to a lower energy alternative.

## Further Information

Energy Series 02 - Understanding your electricity bill

Energy Series 03—Understanding your gas bill

## Contact details

We are here to support you and you can contact us in the following ways:



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Any Questions?...  
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