MADE OF MONEY

Your Energy Your Money

What does it cost to use?

When you are trying to work out what something costs to use there are three things to think about

1. How long am I using this appliance for?

The longer you use something for the more energy it will consume and so the more it will cost you. However, some things use a lot more energy than others so …….

2. The amount of energy the appliance uses

Energy is measured by **watts.** The higher the wattage something has the more energy it is using and the more it will cost. Often you will see information on appliances expressed as kW (1,000 watts) or kWh. kWh stands for kilowatt hour. This is a measure of how much energy is used per hour for that item. If you then want to know how much it will cost you to run that item for an hour you multiply the cost of energy (see below) by the kWh.
The HIGHER the kilowatt hour the more it will cost

3. The cost of energy

The cost used in this exercise is 14.5 pence per kWh. Do you know what you are paying? Can you find a cheaper energy deal?

So what is the total cost?

If you take the **wattage of an item** and work out **how many hours in the day** you will use it for times the **cost of energy** you can calculate the total cost.

For example, in the exercise the electric hob is used for 1 hour per day and has a wattage of 1,500,
1 [hour] * 1,500 [watts]/1,000 [because prices are expressed in 1,000 watt units] * 14.5p [cost per kWh] = 21.75p.
This is the cost of using the electric hob for 1 hour per day. To get the cost for 1 year multiply by 365 days = 21.75p*365 [days in year] = 7,938 pence = £79.38 per year

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Turn over the page to see all the results of the exercise!

What does it cost to use?

	Use per day	Average wattage	kWh per day	Cost per day (* 14.5p)	Total cost per year (* 365) shown as £
Vacuum Cleaner	10 mins	1200w	0.20	2.90p	**£10.59**
Charging a phone o/night	10 hours	5w	0.05	0.73p	**£2.65**
Microwave	15 mins	900w	0.23	3.26p	**£11.91**
Hairdryer	15 mins	1,000w	0.25	3.63p	**£13.23**
Kettle	10 mins[1]	3,000w	0.50	7.25p	**£26.46**
Leaving all our appliances on standby	18 hours	83w	1.49	21.66p	**£79.07**
Electric hob	1 hour	1,500w	1.50	21.75p	**£79.39**
Electric oven	45 mins	2,200w	1.65	23.93p	**£87.33**
Leaving lights in hallway on all day (2 bulbs)	12 hours	200w[2]	1.80	26.10p	**£95.27**
Fridge freezer	8 hours[3]	300w	2.40	34.80p	**£127.02**
Computer	2 hours	200w	0.40	5.80p	**£21.17**
Washing machine	2 hours	2,100w	4.20	60.90	**£222.29**
Electric shower	32 mins	9,000w	4.80	69.60p	**£254.04**
Electric/halogen fire	4 hours[4]	2,000w	8.00	116.00	**£211.70**
Iron	30 mins	1,600w	0.8	11.60p	**£42.34**
Television	4 hours	125w	0.5	7.25	**£26.46**
Total					**£ 1,517.33**

[1] To boil a kettle with water in for two people takes about 1 minute 15 seconds so doing this 8 times will take 10 minutes

[2] 100 watt halogen bulbs – 2 used

[3] Whilst a fridge/freezer is on for 24 hours a day this is divided by three to work out the cost of use to reflect the way a fridge/freezer works

[4] The calculation was done on the basis of using the electric/halogen heater 4 hours a day for half a year. During the summer time the heater will rarely be used but during the winter/colder periods the heater will probably be used beyond 4 hours.