

# Measuring the energy used by your appliances



We are independent. Our complaint resolution service is free, fair and easy to use. If we can't help you, we will tell you about someone who can.

## Measuring kilowatts

You can measure the kilowatt (kW) rating of your appliances by checking your meter and doing your own calculations.

To do this, you will need:

- a pen and paper
- a stopwatch or timer
- a calculator.

The steps are different for each kind of meter.

After you have done this, if you think the amount of energy used by an appliance is higher than it should be, get an electrician to check it.

You can also ask your energy provider to have the meter tested.

Your provider will charge you for this test, but you won't have to pay the charge if your meter is faulty.

Meters aren't usually faulty, so don't ask for a test unless you are sure the meter isn't working.

## Mechanical meters

These meters are mechanical meters. They have a rotating disk that works like an odometer.



To measure the kilowatt rating of an appliance with a mechanical meter:

1. Turn off all appliances and lights.
2. Turn on the appliance you want to measure.
3. Find the black mark on meter's rotating disc. This will help you count the revolutions.
4. Count the number of revolutions the disc makes in one minute.
5. Multiply this number by 60 to get the number of revolutions per hour.
6. On the information plate on the meter, find the number labelled 'RPK' or 'revs per kWh'.
7. Divide the number of revolutions per hour by the RPK to get the kilowatts used. This is the kilowatt rating.

### Example

If you count 10 revolutions in 1 minute and the RPK is 400, the kilowatt rating is 1.5kW:

$$(10 \times 60) \div 400 = 1.5 \text{ kilowatts}$$

The appliance is rated at 1.5kW and uses 1.5 kilowatt-hours (kWh) every hour you use it.

## Electronic meters

These meters are electronic meters. They show the reading on a display screen.



To measure the kilowatt rating of an appliance with an electronic meter:

1. Turn off all appliances and lights.
2. Turn on the appliance you want to measure.
3. Look for a small light or an indicator on the display screen. This light will pulse.
4. Count the number of pulses in one minute while the appliance is running.
5. Multiply this number by 60 (to calculate the number of pulses for an hour).
6. Divide this number by 1,000 to convert the watts into kilowatts. This number is the kilowatt rating of the appliance.

### Example

If you count 25 pulses per minute, the kilowatt rating would be 1.5kW:

$$(25 \times 60) \div 1,000 = 1.5 \text{ kilowatts}$$

The appliance is rated at 1.5kW and uses 1.5 kilowatt-hours (kWh) every hour you use it.

## Smart meters

Smart meters look like electronic meters. They can record your electricity use every 5, 15 or 30 minutes and send the data straight to your provider and distributor.

If you have a smart meter, use the electronic meter steps to measure the kilowatt (kW) rating of your appliances.

Your provider should also offer you online tools to monitor your usage.

### Thermostats

An appliance with a thermostat may use up to 40% less kWh because it will turn itself on and off.

## More help

Read our fact sheet on smart meters for more information.

Contact the Energy Advisory Service for free independent advice.

Call them on (08) 8204 1888 or visit [www.sa.gov.au/energysmart](http://www.sa.gov.au/energysmart).