

A quick guide to reading meters

Although you might be familiar with the look of a gas or electricity meter, are you sure you know how to read one? Don't worry, it's not difficult!

Electricity meters

These are the easiest to read and to enter into your Energy Diary because electricity meters read in kilowatt-hours (kWh), which is the proper name for a "unit" of electricity.

Digital meters

Read the whole row of digits from left to right, including any zeros at the beginning to make sure you have the full reading. If there are additional numbers in a red box, coloured red or as a red dial do not read them, they show fractions of units and are for test purposes only.

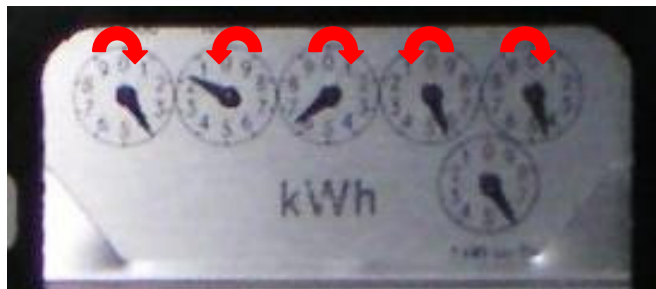
Example: the reading on this meter is: 04207. The last digit is half way between 7 and 8 but you should always round the numbers down instead of up when reading meters. Ignore the red dial, you can see that underneath it says "test dial".



Some electric meters have an LCD display (like a pocket calculator) instead of rotating numbers as above. These are even easier to read because there are no fractions of units on the display.

Dial meters

Dial meters have a row of dials (although sometimes they are arranged differently). The pointers go round from 0 to 9 – the pointers on the dials rotate clockwise and anticlockwise alternately so be careful when you read them! Only read five dials, from the one marked 10,000 down to the one marked 1. Ignore the one which measures tenths of a unit as this is used for testing only.



When reading each dial, record the lowest number that the pointer has gone past, not necessarily the one it is nearest to. For example, if the pointer is between 6 and 7, record 6 even if the pointer is closer to 7.

If the pointer is directly on a number the reading becomes more complicated and you must look at the next dial to make an accurate reading. For example, in the picture above the pointer on the first dial is exactly on 4 and the pointer on the second dial is between 1 and 2.

Read the second dial as normal, i.e. the reading is 1. Then go back to the first dial. Because the second dial is reading greater than zero, the reading on the first dial is true, i.e. 4. So the total meter reading is: 41644.

If the pointer on the second dial had not yet reached zero, the reading on the first dial would fall back one digit to 3, so the meter reading would have started 39XXX instead of 41XXX.

Think of it like a clock: if the hour hand points at 3 and the minute hand is past 12, it is just after 3 o'clock. If the hour hand points at 3 but the minute hand is not at 12 yet, it isn't quite 3 o'clock.

Economy 7

The Economy 7 meter is designed to measure electricity provided on the Economy 7 tariff, which is a cheaper electricity supply for seven hours overnight. The meter therefore supplies two readings, one for the daytime or “on-peak” units and one for the night time or “off-peak” units. This can be on two separate sets of dials or rotating figures, or if there is an LCD display you will have to press a button to display the two different readings.

On the meter itself, the daytime units will be labelled “normal” and the night time units will be labelled “low”. If it is an LCD display, the daytime units will be rate 1 and the night time units will be another rate but never 1. Be careful not to confuse the readings from day and night. You need to record both for your Energy Diary. Take the readings in the same way described above.

Example: this meter reads 292321 for the night rate and 253299 for the day rate. (Remember to round down, not up)



Gas meters

Gas meters measure the volume of gas used, either in cubic feet or cubic metres. You need to be certain what type of meter your school has and record the readings in the corresponding place in the Energy Diary to calculate the costs and carbon dioxide emissions accurately. It will say on the meter. Gas meters are easy to read because they only come in digital (not dial) form. This is what a typical gas meter looks like:



Cubic feet meter

To read this meter you start from the left and read the digits only. The dial on the right is for test purposes only. The reading on this meter is: 113629 cubic feet.



Cubic metre meter

To read this meter you start from the left, including the zeros, and read up to the decimal point. The reading is: 005479 m³. You do not round up the numbers when reading meters.



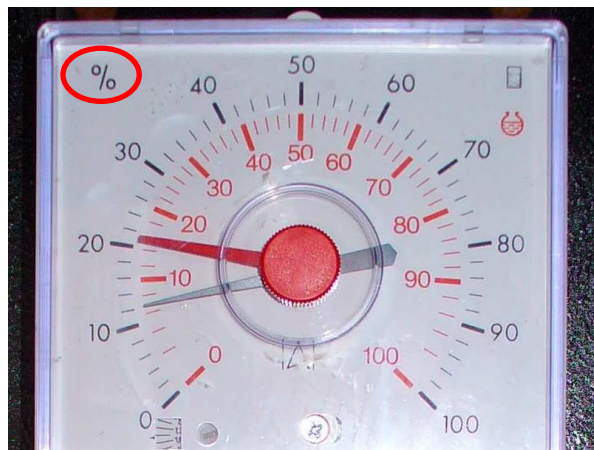
Oil tank gauges

Oil is delivered to customers in bulk, so rather than measure how much supply you have received from a meter, you have to measure how much oil you have left using the gauge on your oil tank. The gauge could measure in litres, or if it is an old tank, in gallons. If your tank measures in gallons you will need to convert your readings to litres before you enter them into the Energy Diary. One gallon is 4.546 litres.

Example: this tank contains about 680 gallons of oil. That's 3,091 litres. To complete your Energy Diary's Oil worksheet you will also need to know when your school receives a delivery of oil, and how much it is.



Some oil tank gauges measure in percentages, like the one below. To calculate how much oil there is in the tank, you need to know the capacity of the tank. The reading on this gauge is indicated by the grey pointer and the black numbers around the outside of the dial. The red pointer can be manually adjusted to set the re-order point.



Adapted from *The Energy Advice Handbook* by Julia Green, sponsored by the Energy Saving Trust and published by EnergyInform (2004)