

INFOSHEET 6

How to read meters

The amount charged by utility companies for electricity, gas, and water is based on readings taken from meters installed at your school. Traditionally meters are read manually at regular intervals and processed by the utility. Some newer electronic or 'smart' meters are read remotely via a modem.

Understanding how to read your school's meters can give valuable information about energy and water consumption which assists locate areas of waste.

For example, if electricity consumption does not decrease during weekends, this may indicate that heating and lighting is left on unnecessarily. Being able to read electricity, gas, or water meters will also enable you to check whether the readings given on the bills are accurate. Electricity meters are calibrated in kiloWatt hours (or a multiple of kWhs). Gas meters will read cubic metres (older meters in cubic feet). Water meters will read kilolitres (kL) and litres.



Typical natural gas meter

HOW TO READ YOUR METERS

There are several meters in use today:

- clock face;
- digital (mechanical);
- electronic; and
- 'smart' meters

Clock face

This type of display can be found on electricity, gas or water meters. Note that, on each clock face, the pointer travels in the opposite direction to the one on the previous dial.

Some clock meters have five dials, others may have six or seven.

To read, stand directly in front of the meter. Commence reading from the right hand dial.

Read each dial in succession to the left. Write down the corresponding figures from right to left as you read them. When a dial hand points between numbers, write down the lower of the two numbers.

For example if it points between 5 and 6, write 5. Between 9 and 0, write 9.



Figure 1—clockface

The meter to the left with five dials would read—04508.

It is easy to make a mistake with clock meters, especially when the clock is near 9. Whenever a pointer is between two numbers, always read the lower number, except when between 0 and 9, write 9.

When a dial hand appears to be exactly on a number, as in Dial D of Figure 2, look at dial C to the right. If the hand on dial C has not passed zero the number (5) has not actually been reached on dial D and so it is the lower number (4). The reading for Figure 2 is 04980.



Figure 2—clockface

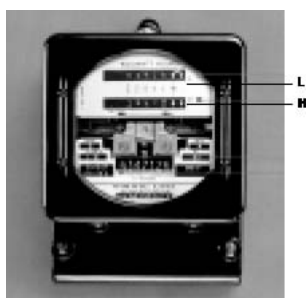


Figure 3—digital meter

Digital

Digital meters are more straightforward to read and are also found on electricity, gas or water meters. Some electricity meters have two registers (sets of dials) where one is used to record consumption during peak (day time) periods and the other for off peak (usually night time) periods. In Figure 3, the two dials are marked L (for low) and H (for high).

The upper window L records off-peak night rate energy and the lower window H records day rate or peak energy.

Smart meters

A 'smart meter' is an electronic electricity meter that is often installed in schools that are 'contestable' customers. (Contestable customers are those that have the option to choose the retailer from which they purchase energy). These meters are capable of reading energy and power every 15 or 30 minutes. This information is stored in a memory and can be read on the meter display. Contact your electricity retailer about how to manually read the smart meter installed at your school. Usually however smart meters are connected to a modem and a phone so that the utility company can read the data from a remote location.

The data from smart meters is very useful for energy management purposes because when graphed it shows the school's electricity consumption throughout the day. Such a graph is called a load profile and your electricity retailer can help to interpret this information.



'Smart' meter

CHECKING WEEKEND CONSUMPTION

To find the energy used over any period, subtract the reading taken at the beginning of the period from the reading taken at the end of the period.

This can help identify waste and weekend and off-peak electricity use.