Energy and water efficiency

Reason	Minimising waste of resources, including water, fuel and electricity, not only helps the environment but also saves money. If you know how to recognise unnecessary use and waste, you are in a better position to help to reduce it.
Outline	This talk covers some of the ways of recognising the potential for reduction of wasted resources and some control measures.

Photovoltaic power

Biomass heating

Meter for monitoring electricity use and cost

A dripping tap will waste enough water to fill around 50 washbasins in one month

Waterless urinals

Using a milk bottle to save flush water

Many tonnes of emissions are produced each year through inefficient use of resources. You can help to reduce waste.

Energy and water efficiency

Reason	Minimising waste of resources, including water, fuel and electricity, not only helps the environment but also saves money. If you know how to recognise unnecessary use and waste, you are in a better position to help to reduce it.
Outline	This talk covers some of the ways of recognising the potential for reduction of wasted resources and some control measures.

Water and energy use

1. Water flows from our taps and has been through an expensive cleaning process to make it safe for us to use. Leaving a tap running or using water unnecessarily is a waste.
2. Natural resources from the ground are refined to produce products such as diesel and petrol, which we use for powering portable equipment.
3. When we plug our tools and equipment into the National Grid for electricity we are benefiting from power stations fired by everything from natural radioactive materials through to gas, coal and oil, all of which are sourced from the ground.
4. Much of the energy produced is wasted, which not only results in additional costs but also in the inefficient use of scarce natural resources and unnecessary contributions to greenhouse gases, global warming and climate change.
5. Switching off all unnecessary appliances and idling plant and vehicles can make a real difference not only to the environment but to the cost of a project.
6. Poor workmanship when installing materials (such as insulation, windows and doors) can have a big impact on how much energy a building uses when it is occupied.

Control measures

1. Ensure that waste is minimised by switching equipment off when it is not in use.
2. Look for opportunities to reuse materials (such as timber off-cuts and recycled aggregates) on site.
3. Operate plant efficiently by using the appropriate power, and ensuring regular services and maintenance.
4. Ensure that site accommodation lighting is switched off when the area is not in use, and windows and doors are not left open with the heating on.
5. Ensure that insulation materials are fitted correctly, without any gaps.
6. Use locally sourced resources, equipment and materials to minimise energy and emissions associated with transport.
7. Report areas where you think improvements can be made.
8. Hoses left running when not in use waste a lot of water in a short time. Trigger guns should be fitted to hoses so that flow can be controlled at the point of use.

Precautions

1. Do not leave doors and windows open when the heating or air-conditioning is on.
2. Do not leave lights on unless they are there for security and safety reasons.
3. Do not leave plant engines running just to keep you warm in the cab.
4. Do not leave taps and other equipment that uses water running. Report any leaks as soon as they occur.

What improvements do you think you could make to improve energy and water efficiency? (This information is also useful advice to take home to reduce your own fuel and water bills.) What steps will you take today to reduce energy consumption?

Now inform your workers of the company provision for energy and water efficiency on site.