

Title:	Improving Energy Efficiency
Level:	Entry Level 3
Credit value:	3
GLH	30
Unique Reference Number:	L/650/0353
Aim:	This unit aims to develop knowledge of the importance of energy efficiency, how to reduce heat loss from a building and how to monitor energy consumption in a building or the home and in a vehicle being driven.
Assessment	Assessment workbook
Learning outcomes	
<i>The learner will:</i>	
1	Know why it is important to become more energy efficient.
Delivery content:	
<p>The aim of this learning outcome is to provide learners with knowledge of energy efficiency and why it is important. Learners will know how the use of energy impacts on themselves, existing natural resources and the climate and will be able to recognise the impact of increased energy efficiency on each of them.</p> <p>The learner must:</p> <ul style="list-style-type: none"> • state the meaning of 'energy efficiency'. • state why energy efficiency is important. • state the impact of maintaining or increasing energy efficiency on: <ul style="list-style-type: none"> ○ self ○ climate. 	
2	Know how to monitor energy consumption in a building/home.
Delivery content:	
<p>The aim of this learning outcome is to provide learners with knowledge of how to monitor energy consumption within a building. Learners will know how to read meters for both gas and electricity and calculate energy usage between consecutive meter readings. Reading</p>	

and identifying the different elements of an energy bill is key to helping learners monitor energy consumption and efficiency.

The learner must:

- state which units of measurement are used for electricity and gas.
- **read a meter/smart meter** to identify how much energy has been used.
- calculate how many **units of energy** have been used between consecutive meter readings.
- identify **elements of an energy bill**.
- state why it is important to check **energy efficiency ratings** when buying **electrical equipment**.

3 Know how to reduce heat loss from a building.

Delivery content:

The aim of this learning outcome is to provide learners with knowledge of where heat may be lost from buildings and ways to reduce this from happening.

The learner must:

- identify areas of a building where heat may be lost.
- identify ways of reducing heat loss from a building.

4 Know how to monitor fuel consumption when a vehicle is being driven.

Delivery content:

The aim of this learning outcome is to provide learners with knowledge of how to monitor fuel consumption for vehicles. Learners will recognise that driving styles can impact on how much or little fuel is consumed throughout a journey and will calculate fuel consumption for a journey completed by two different vehicles.

The learner must:

- state the **types of fuel** used to power a vehicle.
- identify how different driving styles affect fuel consumption.
- calculate fuel consumption for a journey in **different vehicles**.

5 Know sources of information about saving energy.

Delivery content:

The aim of this learning outcome is to provide learners with knowledge of organisations that provide information and advice on energy saving.

The learner must:

- list organisations which provide advice or information about energy saving.
- state the type of advice or information the organisations provide.

Scope of Training

The Scope of Training identifies areas that must be covered during the delivery of this unit. This is the minimum that is expected but tutors are expected to include other areas, knowledge of which will benefit their learners, based on location, types of work available and from the tutors own professional experience.

Requirements	
Energy efficiency is important	Learners should consider: <ul style="list-style-type: none"> • the environment • own finances • benefit of global economy
Read a meter / smart meter	<ul style="list-style-type: none"> • Gas • Electricity • Smart meter
Units of energy	<ul style="list-style-type: none"> • Gas • Electricity
Elements of an energy bill	<ul style="list-style-type: none"> • Wholesale costs • Network costs • Social and environmental obligation costs • Direct costs • Supplier operating costs • Taxes, i.e., VAT
Types of fuel	<ul style="list-style-type: none"> • Petrol • Diesel • Liquified petroleum / propane • Electricity

	<ul style="list-style-type: none"> • Hybrid • Compressed natural gas • Ethanol • Bio-diesel
Different vehicles	<ul style="list-style-type: none"> • Motorbike • Car • Van • Minibus • Bus • Lorry
Energy efficiency ratings	<ul style="list-style-type: none"> • Energy Performance Certificate • Band A (most efficient) through to Band G (least efficient) • Cost savings using energy efficient equipment
Electrical equipment	<ul style="list-style-type: none"> • White goods (washing machines, tumble dryers, fridges/fridge-freezer) • Laptops • Televisions

Scope of Assessment

Learners will complete the Improving Energy Efficiency workbook for this unit.

Learners can use information from websites, news articles, promotional videos, company presentations, TED talks and YouTube videos to help them respond to the questions set out in the workbook.

To add context to the unit, learners should consider how they can improve energy efficiency and reduce heat loss in their home or place of work.