Title:	Improving Energy Efficiency
Level:	1
Credit value:	3
GLH	20
Unique Reference Number:	**J/650/0360**
Aim:	This unit aims to develop knowledge of the importance of energy efficiency, how to monitor energy consumption and reduce heat loss from a building and how to monitor fuel consumption in a vehicle. Learners will understand energy efficiency ratings of electrical equipment and where to find information about saving energy.
Assessment	Project

Learning outcomes
The learner will:

1 Know why it is important to become more energy efficient.

Delivery content:

The aim of this learning outcome is to provide learners with knowledge of energy efficiency and the impact of increasing current levels of energy consumption.

The learner must:

- define 'energy efficiency'.
- identify why energy efficiency is important.
- outline the impact of maintaining or increasing the current **level of energy consumption.**

2 Know how to monitor energy consumption in a building.

Delivery content:

The aim of this learning outcome is to provide learners with knowledge of how to monitor energy consumption in a building and use energy bills to compare energy consumption between different types of dwellings.

The learner must:

- outline the difference between a smart meter and an energy monitor.
- monitor **energy usage** of electricity or gas usage for a week.

• use **energy bills** to compare energy consumption between two types of **dwelling.** • identify what a solar power meter shows.
3 Know how to monitor fuel consumption when driving a vehicle.
Delivery content: The aim of this learning outcome is to provide learners with knowledge of how driving styles affect fuel consumption. Learners will monitor fuel consumption for two different vehicles completing the same journey and work out the cost of the fuel consumption for the journey. The learner must: • outline how different driving styles affect fuel consumption. • compare fuel consumption for the same journey in **different vehicles.** • calculate the cost of fuel consumption on the same journey using different vehicles.
4 Understand energy efficiency ratings of electrical equipment and how they link to energy consumption.
Delivery content: The aim of this learning outcome is to provide learners with knowledge of energy efficiency ratings of electrical equipment and why they should be checked before buying such equipment. Learners will understand how the different ways of using electrical equipment can affect energy consumption and will identify the benefits of energy savings in the home. The learner must: • identify why items of electrical equipment have different wattages. • outline the **energy efficiency ratings** of electrical equipment. • identify the benefits of checking energy efficiency ratings when buying **electrical equipment.** • compare the energy efficiency of a range of similar electrical items. • identify how using equipment in different ways can affect energy consumption. • identify the benefits of using energy savings in the home.
5 Know how to reduce heat loss from a building.

Delivery content: The aim of this learning outcome is to provide learners with knowledge of how heat is lost from a building and how this may be reduced. Learners will identify materials that are used in new buildings to minimise heat loss. The learner must: • outline why heat may be lost from a building. • compare ways of reducing heat loss from a building. • identify new materials that are being used in new builds to minimise heat loss.
6 Be able to use information about energy saving.
Delivery content: The aim of this learning outcome is to provide learners with knowledge of organisations that provide advice or information about energy saving. Learners will access information about energy saving to support their own situation and will outline what incentive scheme are and how they work. The learner must: • identify organisations that provide advice or information about energy saving. • access sources of information about energy saving to gain advice for own situation. • outline how incentive schemes work.

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	
level of energy consumption	Learners should consider the impact on: • self • climate • existing natural resources
Energy usage	Learners should monitor this in:

	• the home • **a business**
Energy bills	• Gas • Electric • Dual Fuel
Dwelling	Any two of the following: • flat • maisonette • terraced house • semi-detached house • detached house
Different vehicles	• Motorbike • Car • Van • Minibus • Bus • Lorry
Energy efficiency ratings	• Energy Performance Certificate • Band A (most efficient) through to Band G (least efficient) • Cost savings using energy efficient equipment
Electrical equipment	• White goods (washing machines, tumble dryers, fridges/fridge-freezer) • Laptops • Televisions

Scope of Assessment

Learners will complete a project that demonstrates their knowledge of improving energy efficiency, covering: • why it is important to become more energy efficient • how to monitor energy consumption in a building • how to monitor fuel consumption when driving a vehicle • energy efficiency ratings of electrical equipment and how they link to energy consumption

- how to reduce heat loss from a building

Learners should consider their own home environment when considering how to improve energy efficiency. Learners should use advice and information about energy savings to demonstrate their knowledge and understanding of how to improve energy efficiency and save energy and where appropriate can use publicly available resources such as websites, news articles, publicity materials or reliable online videos such as YouTube videos.