

## Sustainable Food Production (SFP)

### SFP.108K Principles of energy efficiency in a food environment

#### Unit Summary

This unit is about understanding the principles of efficient energy usage. It includes understanding climate change and the processes that can be used to monitor and control energy efficiency including those used to reduce carbon usage.

This unit applies to you if you are a manager, technologist or consultant who has responsibility for improving energy efficiency in a food environment. It is expected that you will work as part of a team to develop and implement the systems.

#### Related Units

This is a knowledge unit which underpins the skills set out in:

- SFP.125S Promote energy efficiency in food manufacture

You need to know and understand:

1. Climate change legislation and how it controls organisational energy usage
2. Government targets and standards for carbon reduction and climate change and their implications in a food environment
3. How energy consumption impacts on climate change
4. The role of energy efficiency in achieving sustainability
5. The benefits of energy efficiency to the organisation
6. How energy efficiency can help reduce carbon emissions
7. How to use carbon footprints as a measure of energy efficiency
8. The principles of energy efficiency benchmarking as a method of identifying opportunities for improving energy efficiency
9. Sources of low carbon energy and the benefits that low carbon energy offers
10. How to establish current levels of energy usage for all organisational activities
11. Areas of energy usage and opportunities for improving energy efficiency
12. How to develop targets for energy efficiency
13. How to monitor and control energy efficiency
14. The barriers that can limit energy efficiency and the strategies that can be used overcome these barriers
15. How process and product design can impact on energy efficiency
16. How effective process control and quality assurance can support energy efficiency
17. How to complete an organisational cost/benefit analysis in respect to energy efficiency
18. Methods of promoting organisational energy efficiencies
19. How to monitor, control and maintain sustainable energy usage
20. How to define and allocate roles/responsibilities for all those involved in improving energy efficiency
21. How to identify training needs and organise staff training to support the more efficient use of energy
22. How to evaluate the impact of measures to improve energy efficiency

**Key Words**

<b>Barriers</b>	These can be economic, practical, social or legal.
<b>Energy usage</b>	Energy usage including: heating, ventilation, refrigeration, plant and equipment usage, transportation, lighting, insulation and air conditioning.
<b>Energy efficiency</b>	Can be measured in relation to carbon emissions at any given stage in the production process, energy use per unit output of food.
<b>Activities</b>	Incorporating: purchasing, supply, production, storage, packaging, transport and all aspects of business support.
<b>Roles/responsibilities</b>	For: production staff, product developers, buyers, sales staff, customers and contractors
<b>Low carbon energy</b>	Including renewable energy sources, bio digesters etc.
<b>Benchmark</b>	A comparative measure of an organisation against industry best practice.
<b>Benefits</b>	Social, economic and environmental
<b>Legal requirements</b>	Relevant to: <ul style="list-style-type: none"> <li>• The environment including climate change</li> </ul>