



National Occupational Standards for Sustainability

Consultation Document – ‘Energy Efficiency’

Background to the work

Within the current economic and political climate there is a huge amount of emphasis put on ‘sustainable development’. There is now widespread recognition that our current way of life, in terms of the environment, economy, and social justice, is simply not sustainable.

Cogent, has secured government funding to launch a review of sustainability issues in our sector and to use the results to create a comprehensive, nationally recognised set of workplace standards that all employers can access and use.

The initiative will help the industry address Government policies for making industry more sustainable and more environmentally friendly. It is hoped that these occupational standards will define what every worker should know and practice in order to achieve the benefits to be gained from long-term sustainability. In addition it is hoped that it will improve the sector’s environmental and ethical credentials, efficiency and competitiveness, and provide long-term economic benefits.

National Occupational Standards for Sustainability – The Vision

Cogent’s suite of sustainability NOS will seek to define the skills and knowledge needed within an organisation to ensure the sustainable development of the business.

The standards will look beyond environmental awareness to address the real improvements in efficiency and competitiveness which companies are looking to achieve.

They will draw together existing standards, and develop additional material, to cover issues such as energy and climate change, transport, water usage, waste and emissions management, the environment and corporate and social responsibility.

The purpose of the standards is to give companies mechanisms for implementing sustainable practices through staff training and development.

Scope of the standards

The range of the standards will be sufficiently broad to cover the different levels of responsibility within an organisation, from the high-level manager to the process operator.

The Draft Framework of National Occupational Standards for Sustainability

Develop Sustainability Strategy	1 Develop a strategy that strives to achieve sustainability	
Manage sustainable practices	Energy efficiency	2 Promote energy efficiency
	Waste	3 Promote waste minimisation
	Water usage	4 Promote efficient water usage
	Transport	5 Promote efficient transport usage
	Environmental	6 Co-ordination and management of the assessment process and initial Environmental Statement compilation
	Corporate social responsibility	7 Ensure compliance with legal, regulatory, ethical and social requirements
Implement sustainable practices	Energy efficiency	8 Control energy efficiency
	Waste	9 Control waste minimisation
	Water usage	10 Control water usage efficiency
	Transport	11 Control transport efficiency
	Environmental	12 Review environmental performance 13 Improve environmental performance 14 Environmental auditing 15 Report environmental performance 16 Prepare, screen and scope an Environmental Impact Assessment 17 Environmental Impact Assessment for planners 18 Final Environmental Statement reporting, communication and follow up 19 Assess the environmental impact of projects
	Corporate social responsibility	-
Contribute to sustainable practices	20 Contribute to sustainable business practice	
	21 Develop an awareness of environmental good practice	

Consultation Task – Energy Efficiency

For illustrative purposes we have selected one of the themes within the standards, **energy efficiency**, and presented the relevant units. There are three units presented, illustrating three different levels of involvement. Please familiarise yourself with the following introduction before reviewing the content of the individual units.

	Who is this unit for?	What does the unit cover?
Unit 2 Promote energy efficiency	At a management level this unit describes the competence required by those responsible for the design and implementation of energy efficiency programmes	You would expect individuals to be able to demonstrate high levels of technical skills, knowledge and understanding associated with the development of energy efficiency initiatives
Unit 8 Control energy efficiency	At a supervisory level this unit describes the competence required to practically implement programmes and associated measures to improve energy efficiency	You would expect individuals to be able to demonstrate technical skills, knowledge and understanding to facilitate the implementation of energy efficiency initiatives
Unit 20 Contribute to sustainable business practice	At an operational level this unit describes the competence required by those who contribute to the implementation of energy efficiency initiatives	You would expect individuals to be able to demonstrate an awareness of the need to support energy efficiency and adopt the appropriate working practices as part of their day to day routine

Things to think about

- How do the units presented work together as a set? Do they describe the different roles within an organisation for this area of sustainable practice?
- Does each unit capture the right skills and knowledge to ensure an individual would be competent in carrying out this function?
- Is there anything missing within any of the units, or within the framework as a whole?
- Are there any other key sustainability issues which are not captured in the framework?
- Is the language appropriate, clear and relevant to your business/industry?

Please send all of you comments, views and suggestions to...

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National Occupational Standards

Unit Title:	Unit 2: Promote energy efficiency in a manufacturing environment	
Overview:	<p>This unit is about developing policy and guidelines to support energy efficiency in manufacturing.</p> <p>This unit is for you if you work in manufacturing operations and your job requires you to have responsibility for improving the efficient use of energy. You may have management responsibilities for an operational team.</p>	
Scope:	N/A	
Additional Notes:	The following terms have a specific meaning in this unit:	
	Benchmark	A comparative measure of an organisation against industry best practice.
	Energy usage	Energy usage including for example: heating, ventilation, refrigeration, plant and equipment usage, transportation, lighting, insulation and air conditioning.
	Barriers	These can be economic, practical, social or legal
	Energy efficiency	Can be measured in relation to carbon emissions at any given stage in the production process, energy use per unit output of food.
	Activities	Incorporating for example: purchasing, supply, production, storage, packaging, transport and all aspects of business support.
	Roles/responsibilities	For: production staff, product developers, buyers, sales staff, customers and contractors
	Low carbon energy	Including renewable energy sources, bio digesters etc.
	Benefits	Social, economic and environmental
Legal requirements	Relevant to: The environment including climate change	
Previous Version:	<p>This is a tailored version of the units</p> <ul style="list-style-type: none"> ➤ SFP.103S Promote energy efficiency in a food environment, and ➤ SFP.104K Principles of energy efficiency in a food environment <p>which were developed by Improve in March 2009 for the food production industries.</p>	



This section outlines the skills an individual must demonstrate in order to meet the standards in this area.



Performance Criteria

In achieving this unit you must:

1. establish current levels of energy usage for activities undertaken by the organisation
2. identify the legal requirements that control the use of energy
3. identify opportunities for improving energy efficiency together with the benefits they provide
4. specify efficiency targets for each area of energy usage
5. identify potential barriers that may limit energy efficiency
6. specify the monitoring procedures and their frequency to control energy efficiency
7. identify opportunities for sourcing low carbon energy
8. advise on the design of processes and products to help minimise energy requirements
9. promote and support the implementation of efficiency measures for all areas of energy usage
10. promote the application of low carbon energy in support of organisational activities
11. define and allocate roles/responsibilities in support of the implementation and management of measures to improve energy efficiency
12. identify training needs and organise training for those responsible for implementing energy efficiencies
13. develop and implement strategy to overcome barriers that limit the impact of energy efficiency measures
14. establish methods to evaluate the impact of energy efficiency measures
15. support the implementation of monitoring and control procedures
16. evaluate impact of measures to improve energy efficiency
17. specify benefits achieved through efficiency measures

Knowledge and Understanding

Within the limits of your responsibility you must demonstrate that you know and understand:

1. climate change legislation and how it controls organisational energy usage
2. government targets and legal requirements 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 including options for on-site energy generation
10. the benefits that low carbon energy offers
11. how to establish current levels of energy usage for all organisational activities
12. areas of energy usage and opportunities for improving energy efficiency
13. how to develop targets for energy efficiency
14. how to monitor and control energy efficiency
15. the barriers that can limit energy efficiency and the strategies that can be used to overcome these barriers
16. how process and product design can impact on energy efficiency
17. how effective process control and quality assurance can support energy efficiency
18. how to complete an organisational cost/benefit analysis in respect to energy efficiency measures
19. methods for promoting organisational energy efficiencies
20. how to monitor, control and maintain sustainable energy usage
21. how to define and allocate roles/responsibilities for all those involved in improving energy efficiency
22. how to identify training needs and organise staff training to support the more efficient use of energy
23. how to evaluate the impact of measures to improve energy efficiency



National Occupational Standards

Unit Title:	Unit 8: Control energy efficiency	
Overview:	<p>This unit is about maintaining, monitoring and improving energy efficiency. You will need to inform others of their responsibilities; monitor work practices and processes and identify and effectively deal with any inefficient activities.</p> <p>This unit is for you if you have responsibility for supporting energy efficiency for all or part of the production process.</p>	
Scope:	N/A	
Additional Notes:	The following terms have a specific meaning in this unit:	
	Barriers	These can be economic, practical, the personal beliefs and attitudes of people, social or legal compliance
	Sustainable	Something that has the capacity of being maintained over the longterm, economically, environmentally and socially.
	Targets	Relating to energy usage and efficiency
	Area of responsibility	Can include areas used to support: purchasing, supply, production, storage, packaging, transport and all aspects of business support.
	Others	These can be: production staff, customers and contractors
	Benefits	Economic, social, environmental
	Carbon footprint	The effect on the environment in terms of carbon dioxide emissions
	Energy usage	Can include: heating, ventilation, refrigeration, plant and equipment usage, transportation, lighting, climate control and air conditioning
Previous Version:	<p>This is a tailored version of the units</p> <ul style="list-style-type: none"> ➤ SFP.111S Control energy efficiency in a food environment, and ➤ SFP.112K Understand how to reduce energy usage in a food environment <p>which were developed by Improve in March 2009 for the food production industries.</p>	



This section outlines the skills an individual must demonstrate in order to meet the standards in this area.



Performance Criteria

In achieving this unit within the limits of your responsibility you must:

1. obtain and interpret organisational energy usage targets
2. inform others accurately of their responsibilities in relation to organisational targets that promote energy efficiency
3. ensure production processes and working practices comply with organisational targets, quality specifications and legal requirements
4. ensure production processes and working practices make efficient use of energy
5. monitor the working practices and evaluate energy usage and efficiency
6. support others to avoid wasting energy
7. encourage others positively to overcome barriers and improve working practices and energy efficiency
8. provide training and development opportunities to support energy efficiency
9. identify opportunities to encourage others to adopt more energy efficient working practices
10. develop and communicate recommendations for efficiency improvements to others
11. present clear recommendations that support the further development of energy efficient practices, at an appropriate time and with the right level of detail



This section outlines the knowledge and understanding an individual must demonstrate in order to meet the standards in this area.



Knowledge and Understanding

Within the limits of your responsibility you must demonstrate that you know and understand:

1. the impact of energy consumption on carbon emissions
2. how energy efficiency supports sustainable business practices
3. how organisational energy efficiency can help reduce the organisation's carbon footprint
4. the benefits of energy efficiency to the organisation
5. organisational targets and standards for reducing energy usage
6. sources or advice and guidance regarding energy efficiency
7. the different forms of energy usage within area of responsibility
8. how to monitor energy usage efficiency within area of responsibility
9. the measures used within the organisation to achieve energy efficiency and reduce energy usage
10. how the effective management and organisation of work can help minimise energy usage
11. how others can impact on energy usage
12. how staff training and development can help minimise energy usage
13. the barriers that can limit the impact of energy reduction initiatives and how these barriers can be overcome
14. how failure to meet organisational quality specifications can impact on energy usage



National Occupational Standards

Unit Title:	Unit 20: Contribute to sustainable business practice	
Overview:	This unit is about working in a sustainable way. You will need to work effectively to ensure the efficient use of resources and to minimise waste. In addition, you need to assess your own performance and identify and implement opportunities to improve efficiency.	
Scope:	N/A	
Additional Notes:	The following terms have a specific meaning in this unit:	
	Resources	Raw materials, product, packaging, energy, water, transport
	Waste	Raw materials, product, packaging
	Social benefits	Local, national and global
Sustainability	In relation to environmental, economic and social factors	
Previous Version:	<p>This is a tailored version of the units</p> <ul style="list-style-type: none"> ➤ SFP.119S Contribute to sustainable food manufacturing environment, and ➤ SFP.120K Understand how to contribute to sustainable food manufacture <p>which were developed by Improve in March 2009 for the food production industries.</p>	



This section outlines the skills an individual must demonstrate in order to meet the standards in this area.



Performance Criteria

In achieving this unit you must:

1. work effectively according to organisational production specifications
2. assess own performance to identify possible efficiency improvements
3. report accurately any opportunities to improve the efficiency of resource usage
4. report promptly and accurately variations in resource usage and any actions you have taken in response
5. implement actions to improve the efficiency of resource usage
6. work effectively to avoid and minimise waste



This section outlines the knowledge and understanding an individual must demonstrate in order to meet the standards in this area.



Knowledge and Understanding

Within the limits of your responsibility you must demonstrate that you know and understand:

1. what is meant by sustainability
2. why it is important to work to organisational production specifications
3. how to assess own performance for opportunities to improve efficiency
4. the importance of reporting incidences of inefficient resource usage
5. how not working to organisational production specifications can effect sustainability
6. energy and the opportunities available for reducing energy usage
7. the opportunities available for reducing water usage
8. how the efficient use of water supports sustainability
9. how minimising waste supports sustainable food manufacture
10. how the efficient use of resources supports the economic sustainability of the organisation
11. the social benefits of sustainable business practices
12. individual responsibilities relevant to sustainable business practices