

## Higher National Unit Specification

### General information for centres

**Unit title:** Promoting Energy Efficiency in the Workplace

**Unit code:** D96A 34

**Unit purpose:** This unit is designed to enable candidates to understand the concept of energy efficiency, and to gain knowledge about the tools and techniques which can be utilised in the promotion of energy efficiency in the workplace. Candidates should also become aware of where help and advice can be obtained both inside and outside the organisation. It would be of particular relevance to supervisors or middle managers who had line-management responsibility for the implementation of energy management policies.

On completion of the Unit the candidate should be able to:

1. Demonstrate an understanding of the principles of energy efficiency.
2. Demonstrate knowledge of tools and techniques to promote energy efficiency in the workplace.
3. Identify sources of help and advice within and without the organisation.

**Credit value:** 1 HN Credit at SCQF level 7: (8 SCOTCAT credit points at SCQF level 7\*)

*\*SCOTCAT points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCOTCAT points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to doctorates.*

**Recommended prior knowledge and skills:** No previous knowledge is necessary but experience in a supervisory role would be an advantage.

**Core skills:** There may be opportunities to gather evidence towards core skills in this Unit, although there is no automatic certification of core skills or core skills components.

**Context for delivery:** If this Unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

**Assessment:** Assessment will reflect the teaching approach of the presenting centre. Each outcome could be assessed separately under supervised conditions on an on-going basis. Alternatively Outcome 1 could be assessed separately with outcomes two and three combined by use of a workplace-based project or simulated case study in which the principles of energy efficiency are applied to promote energy efficiency in the workplace.

## **Higher National Unit specification: statement of standards**

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Please refer to *Knowledge and/or skills for the Unit* and *Evidence requirements for the Unit* after the Outcomes.

### **Outcome 1**

DEMONSTRATE AN UNDERSTANDING OF THE PRINCIPLES OF ENERGY EFFICIENCY

#### **Knowledge and/or skills**

- Sources and uses of energy
- Reasons for inefficiencies
- Drivers for change
- Approaches to being more energy efficient
- Role of a middle manager or supervisor in the promotion of energy efficiency

#### **Evidence requirements**

Candidates will require to have evidence to demonstrate their knowledge and/or skills by showing that they can:

- Identify sources and uses of energy
- Explain reasons for inefficiencies
- Explain drivers for change
- Evaluate different approaches to being more energy efficient
- Explain the role of a middle manager or supervisor in the promotion of energy efficiency in the workplace

#### **Assessment guidelines**

Assessment will be at the discretion of the presenting centre. Two different approaches could meet the evidence requirements:

- (i) Middle management reports upward and the production of a written report to inform senior management about the need for energy efficiency with suggestions for improvement would allow the candidate to demonstrate an understanding of the principles of energy efficiency. (Recommended length 1000-1500).

## **Higher National Unit specification: statement of standards (cont)**

### **Unit title:** Promoting Energy Efficiency in the Workplace

- (ii) The production of material for a seminar to introduce the principles of energy efficiency to the workforce would reflect the line management role of the middle manager and allow demonstration of competence. This could be evidenced by the production of written material or the delivery of an oral presentation which would need to be long enough to allow for the demonstration of knowledge and understanding required (10-15 minutes).

### **Outcome 2**

#### **DEMONSTRATE KNOWLEDGE OF TOOLS AND TECHNIQUES TO PROMOTE ENERGY EFFICIENCY IN THE WORKPLACE**

##### **Knowledge and/or skills**

- Assessing current situation
- Evaluating alternatives
- Managing the change process

##### **Evidence requirements**

Candidates will need evidence to demonstrate their skills and/or knowledge by showing that they can:

- Explain the need for auditing
- Describe how current working practices can be improved
- Describe project management techniques appropriate to the situation
- Describe how information technology can aid achievement of objectives

##### **Assessment guidelines**

Assessment will be at the discretion of the presenting centre. This outcome presents an opportunity for a workplace-based project, either real or simulated, by means of a case study. It can be assessed in conjunction with outcome 3. Candidates should produce a report which shows how energy efficiency might be promoted in that particular situation by means of appropriate tools and techniques. Recommended length (1200-1500 words). Evidence for outcome 3 could form part of the appendices to the report.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Promoting Energy Efficiency in the Workplace

### **Outcome 3**

IDENTIFY SOURCES OF HELP AND ADVICE WITHIN AND WITHOUT THE ORGANISATION

#### **Knowledge and/or skills**

- Sources of help and advice within the organisation
- Sources of help and advice without the organisation
- Sources of finance available

#### **Evidence requirements**

Candidates will need evidence to demonstrate knowledge and/or skills by showing that they can:

- Identify where they can get help and advice from within the organisation
- Identify where they can get help and advice from outside agencies
- Identify sources of finance

#### **Assessment guidelines**

Assessment will be at the discretion of the presenting centre. This outcome could be assessed in conjunction with outcome 2 where sources of help and advice could become part of the appendices of a report. Alternatively the production of a portfolio or reference guide for a particular organisation would provide candidates with an opportunity to demonstrate ability to research information.

## **Administrative Information**

**Unit code:** D96A 34

**Unit title:** Promoting Energy Efficiency in the Workplace

**Superclass category:** QB

**Date of publication:** October 2002

**Version:** 01

**Source:** SQA

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## **Higher National Unit specification: support notes**

### **Unit title:** Promoting Energy Efficiency in the Workplace

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### **Guidance on the content and context for this Unit**

Wherever possible the context of the unit should be workplace based. The exploration of the principles of energy efficiency should relate to a candidate's own place of work, either current or previous. Alternatively the presenting centre may present suitable opportunities to promote energy efficiency.

#### **Outcome 1: Demonstrate an understanding of the principles of energy efficiency**

On completion of this outcome candidates should have an understanding of how energy is derived and the uses to which it is put in the workplace. This in general will relate to heating, lighting and power and will most probably deal with electricity, gas, compressed air, steam and oil. Renewable and non-renewable sources should be discussed. Candidates need to be aware of how energy dissipates down the supply chain to understand why there is a need for greater energy efficiency. Reasons for inefficiencies should involve discussions about controls, processes, technologies and working practices. Drivers to be energy efficient should include environmental reasons as well as business ones such as legislation and fiscal measures eg. Climate Change Levy. The principle that energy costs are controllable needs to be understood. This should link to the idea of energy management. Above all the principle that energy efficiency is a way of life and not just a one off event should be understood and that programmes proposed should seek continuous improvement.

The role of middle manager or supervisor as lynch pin needs to be understood. Candidates should explore their areas of control, influence and concern to understand how far they can effect change within the workplace.

#### **Outcome 2: Demonstrate knowledge of tools and techniques to promote energy efficiency in the workplace**

On completion of this outcome candidates should be aware of the tools and techniques which could be utilised to promote energy efficiency in the workplace. The need for auditing and the use of an audit as a benchmark against which future improvements can be measured needs to be understood. In promoting energy efficient practices candidates need to know how to manage change and be aware of project management techniques eg the use of monitoring and targeting.

## **Higher National Unit specification: support notes (cont)**

### **Unit title:** Promoting Energy Efficiency in the Workplace

Candidates should demonstrate knowledge of strategies for communication, which are designed to promote a culture of energy awareness. In doing so candidates should show awareness of barriers to energy efficiency and discuss how these might be removed.

The need for training should be explored via training needs analysis which allow training plans to be drawn up as part of continuing professional development and lifelong learning. Finally candidates need to be aware of the uses of information technology to help in the drive to be more energy efficient.

The use of case studies and demonstrations of good practice should support candidates learning. References to Good Practice guides published by the Energy Efficiency Best Practice programme should be made where appropriate.

### **Outcome 3: Identify sources of help and advice within and without the organisation**

On completion of this outcome the candidate should be able to identify sources of help and advice inside and outside the organisation. This should be for the most part by candidate research with lecturer guidance. What will be appropriate will vary with the size of the organisation and the employment sector.

Candidates should be aware of the role and function of the following organisation:

1. The UK Government's Energy and Efficiency Best Practice Programme  
<http://www.energy-efficiency.gov.uk>
2. The Scottish Energy Efficiency Office  
<http://www.energy-efficiency.org/index.shtml>
3. Environmental Technology Best Practice Programme  
<http://www.environwise.gov.uk>
4. The Energy Saving Trust  
<http://www.est.org.uk>

There are other sources of help and advice but should provide a good start and a source of possible links to other organisations.

The role and function of consultants should be discussed and candidates should be aware of journals and networking opportunities such as trade associations. The growth of an energy efficiency industry round the drive to be energy efficient should be mentioned.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** Promoting Energy Efficiency in the Workplace

### **Guidance on the delivery and assessment of this Unit**

The unit should be delivered in a way that enables candidates to appreciate its relevance to the workplace. Wherever possible links should be made to best practice. Assessment will be at the discretion of the presenting centre but it is likely that a workplace-based project either real or simulated would be the most appropriate means of assessment. Outcome 1 could be assessed by the production of a report to senior management or a seminar for delivery to subordinates. Outcomes 2 and 3 could be assessed together by means of a case study or separately by two separate assessment events.

### **Open learning**

This unit could be delivered by distance learning. However it would require planning by the centre to ensure the sufficiency and authenticity of candidate evidence.

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (SQA, 2000).

### **Special needs**

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, 2001).



## **General information for candidates**

### **Unit title:** Promoting Energy Efficiency in the Workplace

This unit is designed to enable you to gain an understanding of the concept of energy efficiency, and to gain knowledge about the tools and techniques which can be used in the promotion of energy efficiency in the workplace. It will also enable you to become aware of where to go for help and advice both inside and outside the organisation.

### **Outcome 1**

In outcome one you will acquire knowledge and understanding about the principles of energy efficiency. You will examine the sources and uses of energy and come to some conclusions about the reasons for inefficiencies. You will also explore approaches to energy efficiency and reach an understanding of the drivers for change. The role of the middle manager or supervisor in the promotion of energy efficiency in the workplace will be discussed.

Assessment of this outcome will be by negotiation with your tutor. It may take the form of a report or an extended oral presentation.

### **Outcome 2**

In this outcome you will find out about the tools and techniques for improving energy efficiency. You will come to understand the need for auditing and explore how current working practices can be improved. In promoting energy efficiency you will learn about the importance of assessing the current situation, evaluating alternatives and managing the change process. In doing so you will consider project management techniques and the use of technology to aid the achievement of objectives.

Assessment of this outcome will be by means of a report on a workplace-based project. This will be either real or simulated depending on candidate's circumstances.

### **Outcome 3**

The focus of this outcome is identifying where you can find help and advice from within an organisation and from outside agencies. Sources of funding will also be discussed.

This outcome may be assessed in conjunction with outcome 2. Alternatively you may be asked to compile a portfolio or reference guide appropriate to a particular situation. What is important is that you demonstrate your ability to research information and present it in an accessible manner.