



Australian Government

UEEFS2007 Explore climate control and energy efficiency systems

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Modification History

Release	Comments
1	This unit of competency was first released in UEE Electrotechnology Training Package Release 10.0.

Unit outcomes

This unit introduces learners to the relationship between climate change, climate control, and energy efficiency systems, with a focus on how climate control systems are used to manage indoor environments and influence energy consumption and environmental outcomes.

It supports the development of foundation and employability skills, preparing learners for further vocational training, apprenticeships, or employment in the energy sector.

On completion of this unit, learners will be able to demonstrate basic knowledge of environmental and energy issues relevant to climate control and energy efficiency systems, the purpose and function of climate control systems used in indoor environments, and the types of entry-level roles, emerging energy-related roles and career pathways in related energy sector industries. They will have the skills to interpret climate control and energy use scenarios or case studies to identify problems, develop a basic solution to improve efficiency, participate in project activities, and communicate information about climate control using appropriate energy sector terminology.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Knowledge

On successful completion of this unit, learners will have:

- basic factual knowledge of:
 - the relationship between climate change and climate control systems
 - environmental and energy issues that influence the use of climate control and energy efficiency systems
 - terminology used in climate control systems
 - the purpose, applications, and scope of work of the climate control and energy efficiency industry
 - industry associations

- entry-level occupations, emerging roles and career pathways relating to the HVACR industry
- basic technical knowledge of:
 - the purpose, function, major components, operating principles, and performance of heating, ventilation, air conditioning, and refrigeration (HVACR) systems used in indoor environments
 - how HVACR systems affect comfort, air quality, energy use, and energy efficiency
 - basic numerical concepts used to compare energy use or system performance
 - the use of digital tools where required to compare energy use, record observations, and communicate project information.

Skills

On successful completion of this unit, learners will have:

- cognitive skills to:
 - access and interpret information from scenarios or case studies
 - identify problems or inefficiencies in climate control and energy use affecting energy consumption and environmental impacts
- technical and procedural skills to:
 - develop a basic solution to improve energy efficiency or reduce environmental impact
 - make basic comparisons of energy use or system performance
 - record task observations and project information using appropriate formats
 - use digital tools where required to record, organise, compare, or present project information
- communication skills to:
 - communicate technical information about climate control and energy use issues
 - use appropriate energy sector terminology effectively
- collaboration skills to:
 - participate in project activities with others.

Application of Knowledge & Skills

Learners will apply their knowledge and skills in a structured learning environment. They will use autonomy and limited judgement to:

- plan and manage tasks to explore how climate control systems are used to manage indoor environments

- interpret a scenario to identify a problem or inefficiency in HVACR systems
- apply core principles of climate control to develop a basic solution to reduce energy use or environmental impact
- record observations and project information relevant to the task
- make basic comparisons of energy use or system performance
- record, organise, or present project information using digital tools where required
- communicate project information using appropriate energy sector terminology.

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

Foundational Skills

Unit sector(s)

Electrotechnology

Range of conditions

N/A

Assessment Requirements for UEEFS2007 Explore climate control and energy efficiency systems

Performance Evidence

The individual must demonstrate the ability to:

- interpret a scenario or case study related to climate control and energy use issues in a residential or commercial setting to identify a problem or inefficiency affecting energy consumption or environmental impact
- develop a basic solution to reduce energy consumption or environmental impact in response to the identified problem or inefficiency using basic comparisons of energy use or system performance
- record task observations and project information using appropriate energy sector terminology and written notes, labelled diagrams, or digital tools
- communicate information about the scenario while participating in project activities with others, using appropriate energy sector terminology to explain the problem and proposed solution.

Knowledge Evidence

The individual must demonstrate knowledge of:

- the relationship between climate change and climate control, including:
 - weather and climate
 - climate change, including effects, causes and reduction
- environmental issues, including:
 - ozone depletion
 - greenhouse gases
 - global warming
 - effects of synthetic refrigerants on the environment
 - relevant Australian environmental protocols and agreements
 - current and future climate control responses to environmental issues
 - energy efficiency rating systems
- energy issues, including:
 - global energy outlook
 - current and future sources of electricity generation
 - effect of electricity generation on the environment
 - current and future climate control responses to energy issues

- the purpose and function of climate control systems used in indoor environments, including:
 - heating
 - ventilation
 - air conditioning
 - refrigeration
- major components, purpose and operating principles of climate control systems
- how climate control systems affect indoor comfort and air quality, including factors that influence:
 - temperature
 - airflow
 - humidity
- how energy is used efficiently to power climate control systems, including:
 - electricity use
 - sources of energy loss
 - the impact of inefficient systems on energy consumption
- basic terminology used to describe climate control systems and their performance
- the purpose, applications and scope of work, including:
 - climate control and energy efficiency industry associations
 - entry-level occupations, emerging roles and career pathways in the energy sector related to the HVACR industry.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must be limited to scenario-based or case-study-based activities and must not require individuals to install, service, test, diagnose, repair, or handle live HVACR systems, refrigeration systems, refrigerants, or associated electrical equipment.

Mandatory Workplace Requirements

There are no mandatory workplace requirements for assessment. Assessment of performance evidence may be in a structured learning environment.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
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	Newly created	This unit has been created to address a skill or task required by industry that is not covered by an existing unit of competency
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Links

Companion volumes, including implementation guides, are found on the national training register - <https://training.gov.au/training/details/UEE>.