



Australian Government

UEEFS2006 Explore industrial gases in the energy sector

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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 industrial gases in the energy sector, with a focus on how these fuels are produced, stored, and used for energy supply in residential, commercial, and industrial contexts.

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 industrial gases, their comparative benefits and limitations, their role in energy supply, 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 scenarios, compare gas types using defined criteria, record findings, and communicate information about energy supply involving industrial gases 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 purpose and use of industrial gases in energy production, storage, distribution, and supply across residential, commercial, and industrial contexts
 - the benefits and limitations of industrial gases in residential, commercial, and industrial contexts
 - the role of industrial gases in meeting energy supply needs
 - entry-level occupations, emerging roles and career pathways related to the industrial gas industry in the energy sector
- basic technical knowledge of:
 - the main components of simple gas supply systems
 - the differences between gas types used for energy supply

- the concept of gas as a transitional fuel
- key factors that influence the use of different gas types, including government policy, regional infrastructure, and industry requirements
- the numerical concepts used to compare gas types against defined criteria including cost, safety, environmental impact, and suitability for context
- the use of digital tools where required to record, organise, compare, or communicate project information
- conceptual understanding of:
 - safety considerations relating to the real-life storage, handling, and use of industrial gases, including flammability, ventilation, and detection.

Skills

On successful completion of this unit, learners will have:

- cognitive skills to:
 - access and interpret information about industrial gases used for energy supply
 - identify energy supply issues in a residential scenario
 - apply defined criteria to compare different gas types
- technical and procedural skills to:
 - develop a conceptual solution
 - make basic comparisons and record findings that identify similarities, differences, safety considerations, environmental considerations, and suitability
 - use digital tools where required to record, organise, compare, or present project information
- communication skills to:
 - communicate information about a proposed solution involving industrial gases
 - communicate the benefits and limitations of alternative gas types to support energy needs
 - 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 industrial gases are used to support residential energy supply

- interpret a scenario and identify an energy supply issue
- compare different gas types against defined criteria
- apply core principles of industrial gas energy to develop a conceptual solution to address the supply issue
- record and communicate information about a proposed solution and the comparison findings using appropriate energy sector terminology
- use digital tools where required to record, represent, or present project information.

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 UEEFS2006 Explore industrial gases in the energy sector

Performance Evidence

The individual must demonstrate the ability to:

- interpret a residential energy supply scenario to identify the energy supply issue and the industrial gas types that could be used to address it
- develop a conceptual solution that addresses a residential energy supply need identified in the scenario
- identify advantages, disadvantages, environmental and safety considerations of different industrial gas types relevant to the scenario
- compare two gas types using defined criteria including cost, safety, environmental impact, and suitability for the scenario
- record the comparison in a clear and organised format that identifies key similarities, differences, safety considerations, and suitability of each gas type using written notes, labelled diagrams or digital tools
- communicate information about the proposed solution while participating in project activities with others, using appropriate energy sector terminology to describe the benefits of alternative gas types to support energy needs.

Knowledge Evidence

The individual must demonstrate knowledge of:

- entry-level occupations, emerging roles and career pathways in the energy sector related to industrial gas work
- the role of different industrial gases in energy production, distribution, and storage across industrial, commercial, and residential contexts
- the purpose and function of industrial gases in energy supply, including common end uses in residential, commercial, and industrial settings
- the main components of simple gas supply systems, including storage, distribution, and end-use applications
- key differences between gas types used for energy production, including:
 - fuel sources
 - methods of production
 - emissions profiles
 - energy applications
- the concept of gas as a transitional fuel and the use of alternative gas types in reducing emissions

- benefits and limitations of different gas types, including:
 - availability
 - infrastructure
 - energy density
 - cost
 - environmental impact
- key factors influencing the use of different gas types in the energy sector, including:
 - government policy
 - regional infrastructure
 - industry requirements
- awareness and conceptual understanding of safety considerations related to the real-life storage, handling, and use of different industrial gases, including:
 - flammability
 - ventilation
 - detection
- basic numerical concepts for comparing gas types to identify advantages and disadvantages using criteria including:
 - cost of implementation
 - safety risks and controls
 - environmental impact
 - suitability for specific settings or applications.

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 conceptual and scenario-based activities and must not require individuals to store, handle, use, or interact with real industrial gases or live gas systems.

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>.