


# COMPANION VOLUME IMPLEMENTATION GUIDE

UEG GAS INDUSTRY TRAINING PACKAGE

Release 4.0



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## ABOUT AUSTRALIAN INDUSTRY STANDARDS

Australian Industry Standards (AIS) provides high-quality, professional secretariat services to eleven Industry Reference Committees (IRCs), in our role as a Skills Service Organisation (SSO).

The eleven allocated IRCs incorporate Gas, Electricity, Electrotechnology, Corrections, Public Safety (including Police, Fire Services and Defence), Water, Aviation, Rail, Maritime and Transport and Logistics industries. AIS supports these important industry sectors using our world-class in-house capability and capacity in technical writing, quality assurance, project management and industry engagement in the production of Training Packages.

AIS was established in early 2016, 20 years after its predecessor the Transport and Logistics Industry Skills Council (TLISC) was established in 1996. More information about AIS can be found at [www.australianindustrystandards.org.au](http://www.australianindustrystandards.org.au)

- We support industry growth and productivity through our modern innovative approach to establishing skills standards
- We provide high-quality, professional secretariat services to help our allocated IRCs develop the skills that industry needs
- We partner with industry to shape the workforce of the future.

## OVERVIEW INFORMATION

This Companion Volume Implementation Guide (CVIG) is designed to assist assessors, trainers, Registered Training Organisations (RTOs) and enterprises in delivering the UEG Gas Industry Training Package. It provides advice about the structure of the Training Package; its key features and useful links to more detailed information on a range of related topics.

### VERSION CONTROL AND MODIFICATION HISTORY

Training Packages are dynamic documents and are amended periodically to reflect the latest industry practices. Training Packages are version controlled so it is essential that the latest release is always used.

In the version control and modification history table below, the latest information is provided first.

Version Number	Release Date	Comments
4.0	TBA	<p>This is the fourth release of this Training Package (Release 4.0).</p> <p>Four (4) revised qualifications:</p> <ul style="list-style-type: none"> <li>• UEG20122 Certificate II in Gas Supply Industry Operations</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEG30122 Certificate III in Gas Supply Industry Operations</li> <li>• UEG40222 Certificate IV in Gas Supply Industry Operations</li> <li>• UEG50122 Diploma of Gas Supply Industry Operations</li> </ul> <p>Fifty-nine (59) revised Units of Competency</p> <ul style="list-style-type: none"> <li>• UEGNSG002 Apply environmental policies and procedures in the gas supply industry</li> <li>• UEGNSG007 Assess the operational capability of gas safety equipment on a delivery vehicle</li> <li>• UEGNSG008 Assist with the construction and laying of gas distribution mains</li> <li>• UEGNSG009 Assist with the construction, laying and connection of gas distribution services to mains</li> <li>• UEGNSG010 Conduct general excavations</li> <li>• UEGNSG011 Conduct isolations under the permit to work system for gas industry worksites</li> <li>• UEGNSG012 Construct and lay plastic gas distribution mains</li> <li>• UEGNSG013 Construct, lay and connect a gas distribution service to a main</li> <li>• UEGNSG015 Coordinate gas transmission pipeline repairs and modifications</li> <li>• UEGNSG016 Establish right of way access and maintain transmission pipeline easement</li> <li>• UEGNSG017 Fill by weight industrial gas cylinders</li> <li>• UEGNSG018 First on site response to gas pipeline emergencies</li> <li>• UEGNSG019 Inspect, test and maintain gas cylinders</li> <li>• UEGNSG020 Load, unload, exchange and connect industrial gas cylinders</li> <li>• UEGNSG021 Maintain multi-stage, multi-run pressure control devices</li> <li>• UEGNSG022 Maintain single stage, single run pressure control devices</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG023 Manage a utilities industry health, safety and environmental (HSE) management system</li> <li>• UEGNSG024 Monitor and control the transfer of bulk industrial gas</li> <li>• UEGNSG025 Monitor and operate complex flow control, measuring and regulating devices</li> <li>• UEGNSG026 Perform routine maintenance on distribution pipelines and facilities</li> <li>• UEGNSG027 Perform routine maintenance on transmission pipeline facilities and equipment</li> <li>• UEGNSG028 Perform scheduled maintenance on gas processing or storage facilities and equipment</li> <li>• UEGNSG029 Process, mix and blend industrial gases</li> <li>• UEGNSG030 Store and handle bulk industrial gases</li> <li>• UEGNSG031 Prepare to work in the gas industry</li> <li>• UEGNSG032 Carry out aerial surveillance of gas transmission pipelines</li> <li>• UEGNSG033 Carry out basic work activities in a gas industry work environment</li> <li>• UEGNSG034 Carry out surveillance of gas transmission pipelines</li> <li>• UEGNSG035 Respond to gas infrastructure emergencies</li> <li>• UEGNSG036 Supervise and monitor contract work</li> <li>• UEGNSG037 Supervise technical operations for gas distribution or transmission</li> <li>• UEGNSG038 Supervise the operation of plant and equipment for the construction of gas transmission pipelines</li> <li>• UEGNSG039 Test new residential and small commercial gas installations</li> <li>• UEGNSG040 Use a portable detector to locate a combustible gas escape</li> <li>• UEGNSG041 Apply safe working practices in the gas supply industry</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG042 Pressure test residential and small commercial gas installations</li> <li>• UEGNSG043 Relight Type A gas appliances</li> <li>• UEGNSG044 Repair and maintain stationary gas fuelled turbine engines</li> <li>• UEGNSG045 Carry out surveillance on gas distribution assets</li> <li>• UEGNSG046 Coat metallic pipelines</li> <li>• UEGNSG047 Compile a gas industry technical report</li> <li>• UEGNSG048 Conduct butt fusion of large diameter polyethylene gas pipeline systems</li> <li>• UEGNSG049 Control excavations in the vicinity of gas transmission pipelines</li> <li>• UEGNSG050 Control field pipeline operations</li> <li>• UEGNSG051 Coordinate repair of pipeline, facilities and equipment</li> <li>• UEGNSG052 Establish a utilities infrastructure worksite</li> <li>• UEGNSG053 Install and commission stationary gas fuelled turbine engines</li> <li>• UEGNSG054 Install cathodic protection systems</li> <li>• UEGNSG055 Launch and recover PIGs in a gas distribution pipeline</li> <li>• UEGNSG056 Launch and recover PIGs in gas transmission pipelines</li> <li>• UEGNSG057 Liaise with third party and the community to maintain pipeline integrity and community safety</li> <li>• UEGNSG058 Locate, prove and protect utility assets</li> <li>• UEGNSG059 Maintain cathodic protection systems</li> <li>• UEGNSG060 Maintain SCADA controlled flow and pressure equipment and electronic gas measurement equipment</li> <li>• UEGNSG061 Monitor and control gas odourisation</li> <li>• UEGNSG062 Monitor and report on cathodic protection systems</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG063 Operate and maintain gas station water bath heaters</li> <li>• UEGNSG064 Operate and monitor pipeline control systems</li> <li>• UEGNSG065 Install gas flow, measuring and pressure regulating devices</li> </ul> <p>One (1) new unit of competency</p> <ul style="list-style-type: none"> <li>• UEGNSG014 Control industrial gas storage/processing operations</li> </ul>
3.0	24 November 2021	<p>This is the third release of this Training Package (Release 3.0).</p> <p>Three qualifications have been recoded due to addition of new Units of Competency:</p> <ul style="list-style-type: none"> <li>• UEG20121 Certificate II in Gas Supply Industry Operations</li> <li>• UEG30121 Certificate III in Gas Supply Industry Operations</li> <li>• UEG40221 Certificate IV in Gas Supply Industry Operations</li> </ul> <p>14 new Units of Competency have been added to the Training Package:</p> <ul style="list-style-type: none"> <li>• UEGNSG306 Control gas processing, storage or regasification operations in an LNG storage facility</li> <li>• UEGNSG312 Inject gas into underground storage</li> <li>• UEGNSG315 Withdraw gas from underground storage</li> <li>• UEGNSG701 Disconnect and reconnect data logging equipment</li> <li>• UEGNSG703 Fault find and repair data logging equipment</li> <li>• UEGNSG704 Install and commission data logging equipment</li> <li>• UEGNSG707 Process data logging information</li> <li>• UEGNSG715 Use data logging equipment</li> <li>• UEGNSG901 Apply safety practices, procedures, and compliance standards for handling hydrogen gas</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG902 Commission, operate and maintain electrolysers</li> <li>• UEGNSG903 Fault find and repair hydrogen storage equipment</li> <li>• UEGNSG904 Inject hydrogen gas into distribution networks</li> <li>• UEGNSG905 Monitor and control hydrogen in gas distribution networks</li> <li>• UEGNSG906 Undertake routine hydrogen storage operations</li> </ul> <p>Three new skillsets have been added to the Training Package:</p> <ul style="list-style-type: none"> <li>• UEGSS00013 Basic Hydrogen Safety Skill Set</li> <li>• UEGSS00014 Inject Hydrogen into Distribution Networks Skill Set</li> <li>• UEGSS00015 Monitor Hydrogen using Control Systems Skill Set</li> </ul> <p>21 existing Units of Competency have been updated:</p> <ul style="list-style-type: none"> <li>• UEGNSG102 Prepare safe design specifications of a gas system</li> <li>• UEGNSG103 Install and commission stationary gas fuelled turbine engines</li> <li>• UEGNSG205 Commission or decommission gas distribution pipelines</li> <li>• UEGNSG206 Construct and lay copper and stainless steel gas distribution pipelines</li> <li>• UEGNSG208 Construct and lay large copper gas distribution pipelines</li> <li>• UEGNSG209 Construct and lay polyethylene gas distribution mains</li> <li>• UEGNSG211 Construct and lay steel gas distribution pipelines</li> <li>• UEGNSG214 Coordinate and conduct gas distribution pipeline repair and modifications</li> <li>• UEGNSG215 Coordinate construction, laying and testing of gas distribution pipelines</li> <li>• UEGNSG230 First on site response to gas pipeline emergencies</li> <li>• UEGNSG303 Carry out transmission pipeline construction work activities</li> </ul>



Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG304 Commission or decommission gas transmission pipelines</li> <li>• UEGNSG307 Coordinate the operation of relevant plant and equipment for transmission pipeline construction</li> <li>• UEGNSG309 Coordinate transmission pipeline construction operations</li> <li>• UEGNSG313 Monitor and operate flow control, pressure measuring and regulating devices for gas transmission</li> <li>• UEGNSG316 Work in proximity of transmission pipeline construction plant and equipment</li> <li>• UEGNSG317 First response to a gas facility event</li> <li>• UEGNSG509 Remotely monitor and operate gas transmission flow and pressure measuring and regulating devices</li> <li>• UEGNSG702 Disconnect and reconnect small capacity gas meters</li> <li>• UEGNSG709 Process meter reading information using appropriate technology</li> <li>• UEGNSG710 Read and record meter readings</li> </ul> <p>These products received minor changes due to update of superseded Units of Competency:</p> <ul style="list-style-type: none"> <li>• UEG40120 Certificate IV in Gas Control Operations</li> <li>• UEG50120 Diploma of Gas Supply Industry Operations</li> <li>• UEGSS00008 Construct and Lay Steel Gas Distribution Mains Skill Set</li> <li>• UEGSS00010 Construct and Lay Polyethylene Gas Distribution Mains Skill Set</li> </ul>
2.1	21 April 2021	<p>This release incorporates the deletion of one qualification and 17 Units of Competency from the Training Package.</p> <p>Qualification:</p> <ul style="list-style-type: none"> <li>• UEG60120 Advanced Diploma of Gas Supply Industry Operations</li> </ul> <p>Units of Competency:</p>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG111 Produce maintenance strategies and plans for a gas facility</li> <li>• UEGNSG114 Coordinate and monitor implementation of a risk management plan for a utilities industry facility</li> <li>• UEGNSG115 Manage gas systems projects</li> <li>• UEGNSG116 Manage gas industry physical resources</li> <li>• UEGNSG117 Plan and implement the data acquisition and metering requirements of a gas system</li> <li>• UEGNSG118 Select and commission equipment to meet pressure and temperature control specifications</li> <li>• UEGNSG119 Manage workplace risk in a gas industry facility</li> <li>• UEGNSG122 Manage a customer service gas business unit</li> <li>• UEGNSG123 Manage financial resources in a gas industry facility</li> <li>• UEGNSG308 Identify, evaluate and control threats to transmission pipelines</li> <li>• UEGNSG311 Site control of third party works in the vicinity of a transmission pipeline</li> <li>• UEGNSG319 Custody transfer metering and gas quality analysis</li> <li>• UEGNSG324 Follow company procedures to deal with incidents related to the abuse of drugs and alcohol</li> <li>• UEGNSG332 Undertake hydro-testing for transmission pipeline construction</li> <li>• UEGNSG508 Remotely check and report on gas station conditions</li> </ul> <p>The above Units of Competency have been removed from these qualifications:</p> <ul style="list-style-type: none"> <li>• UEG20120 Certificate II in Gas Supply Industry Operations</li> <li>• UEG30120 Certificate III in Gas Supply Industry Operations</li> <li>• UEG40120 Certificate IV in Gas Control Operations</li> <li>• UEG40220 Certificate IV in Gas Supply Industry Operations</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEG50120 Diploma of Gas Supply Industry Operations</li> </ul> <p>These existing Units of Competency are added to UEG50120 Diploma of Gas Supply Industry Operations as electives in Group E:</p> <ul style="list-style-type: none"> <li>• UEGNSG121 Prepare safe design specifications of a gas system</li> <li>• UEGNSG202 Conduct emergency site control on gas distribution assets</li> <li>• UEGNSG301 Conduct emergency site control on gas transmission assets</li> </ul>
2.0	25 January 2021	<p>This is the second release of this Training Package (Release 2.0).</p> <p>One new qualification has been added to the Training Package: UEG40120 Certificate IV in Gas Control Operations Superseded imported units have been updated in all qualifications, which resulted in re-coding of all qualifications in UEG Training Package Release 1.0.</p> <p>Six new Units of Competency have been added to the Training Package:</p> <ul style="list-style-type: none"> <li>• UEGNSG101 Undertake gas leak surveys</li> <li>• UEGNSG201 Conduct distribution pipeline emergency repair</li> <li>• UEGNSG202 Conduct emergency site control on gas distribution assets</li> <li>• UEGNSG203 Evaluate and extinguish gas fire</li> <li>• UEGNSG301 Conduct emergency site control on gas transmission assets</li> <li>• UEGNSG302 Conduct transmission pipeline emergency repair</li> </ul> <p>Five Units of Competency from UEG Training Package Release 1.0 have been updated, the new units supersede and are all equivalent to the previous versions:</p> <ul style="list-style-type: none"> <li>• UEGNSG501 Communicate with gas industry stakeholders to meet operational requirements</li> </ul>

Version Number	Release Date	Comments
		<ul style="list-style-type: none"> <li>• UEGNSG502 Implement emergency and critical incident response for gas infrastructure incidents</li> <li>• UEGNSG503 Monitor and control field activities</li> <li>• UEGNSG504 Monitor and control gas infrastructure using Control Centre systems</li> <li>• UEGNSG505 Operate and monitor gas infrastructure to meet nominated demand</li> </ul> <p>These Units of Competency received minor changes:</p> <ul style="list-style-type: none"> <li>• UEGNSG142 - Conduct isolations under the permit to work system for gas industry work sites</li> <li>• UEGNSG221 - First on site response to gas pipeline emergencies</li> </ul>
1.0	5 September 2018	This is the first release of this Training Package (Release 1.0).

## TRAINING PACKAGES, THE AUSTRALIAN QUALIFICATIONS FRAMEWORK AND COMPETENCY STANDARDS

### Training Packages

Training Packages:

- Specify the qualifications determined by industry groups and when required, by regulatory requirements to be most relevant for employment within the industry
- Are developed by the relevant national IRCs in consultation with a range of stakeholders
- Are recommended to the Australian Industry and Skills Committee (AISC) for endorsement by the Council of Australian Governments (COAG) Industry and Skills Council
- Enable nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- Encourage the development and delivery of flexible training to suit individual needs and industry requirements
- Support learning, training and assessment in a work-related environment, leading to verifiable workplace outcomes.

The title of each endorsed Training Package is unique and relates to the broad industry coverage of the Training Package.

Each Training Package has a unique national code assigned when the Training Package is endorsed, for example UEG.

Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualification/s or specific unit/s of competency on its scope of registration.

New Standards for Registered Training Organisations (RTOs) 2015 came into effect on 1 April 2015 and are located on the [Australian Government ComLaw website](#).

Information about these standards can be found at the:

- [Department of Education and Training](#)
- [Australian Skills Quality Authority](#)

Standards for Training Packages apply to the design and development of Training Packages for endorsement by the authorising body.

Information about these current standards, including applicable templates, can be found at the Department of Employment, Skills, Small and Family Business website:

<https://www.employment.gov.au/training-packages>

These templates describe mandatory and optional information that applies to Units of Competency, assessment requirements and qualifications.

## **Australian Qualifications Framework**

The Australian Qualifications Framework (AQF) provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the Vocational Education and Training (VET) sector the AQF enables national recognition of qualifications and Statements of Attainment.

The UEG Gas Industry Training Package Release 4.0 provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

The packaging rules are defined within each qualification in a Training Package.

## **Competency Standards**

The broad concept of industry competency is the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency standards cover all aspects of workplace performance and involve:

- Performing individual tasks
- Managing a range of different tasks
- Responding to contingencies or breakdowns
- Dealing with the responsibilities of the workplace, including working with others.

Workplace competency is the ability to apply relevant skills and knowledge consistently over time and in the required workplace situations and environments.

Competency standards are determined by industry to meet industry skill needs and focus on what is expected of a competent individual in the workplace.

# AUSTRALIAN QUALIFICATIONS FRAMEWORK QUALIFICATIONS, SKILL SETS AND UNITS OF COMPETENCY IN THE UEG GAS INDUSTRY TRAINING PACKAGE

## Qualifications

The UEG Gas Industry Training Package provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

## Codes and titles

There are mandatory conventions specified in the Standards for Training Packages for the titles and codes used in Training Packages and their components.

<b>QUALIFICATION CODE</b> MANDATORY FIELD	The qualification code contains the three alpha characters identifying the Training Package, a numeric character identifying the AQF level, a two numeric character sequence identifier, and two numeric characters identifying the year the qualification was endorsed. It must comply with the length specified in the AVETMIS Standard.
<b>QUALIFICATION TITLE</b> MANDATORY FIELD	A unique title that reflects the qualification outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters).

Extract from [Standards for Training Packages](#)

Extract from [Training Package Products Policy](#)

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- First, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Graduate Certificate, or Graduate Diploma
- This is followed by the words 'in' for Certificates I to IV and Graduate Certificate, and 'of' for Diploma, Advanced Diploma and Graduate Diploma
- Then, the industry descriptor, for example Warehousing
- Then, if applicable, the occupational or functional stream in brackets, for example (Track Work)

Each qualification has an eight-character code where the:

- First three characters identify the Training Package
- First number identifies the AQF qualification level
- Second and third numbers identify a qualification's position in the sequence of qualifications at that AQF qualification level
- Fourth and fifth numbers identify the year in which the qualification was endorsed

For example: **UEG40222 Certificate IV in Gas Supply Industry Operations**

## AQF Qualifications in the UEG Gas Industry Training Package

The following AQF qualifications are in the UEG Gas Industry Training Package:

Code	Qualification Title
<b>AQF 2</b>	
UEG20122	Certificate II in Gas Supply Industry Operations
<b>AQF 3</b>	
UEG30122	Certificate III in Gas Supply Industry Operations
<b>AQF 4</b>	
UEG40222	Certificate IV in Gas Supply Industry Operations
<b>AQF 5</b>	
UEG50122	Diploma of Gas Supply Industry Operations

## Skill Sets

### Codes

Skill Sets are single Units of Competency or combinations of Units of Competency from an endorsed Training Package/s that link to a licensing or regulatory requirement or a defined industry need.

Source: [Training Package Products Policy](#)

A Skill Set is awarded with the issuing of a Statement of Attainment.

Each Skill Set has a code that is automatically issued by training.gov.au (TGA) where the:

- First three characters identify the Training Package
- Next two characters indicate that it is a Skill Set
- Numbers identify the Skill Set's position in the sequence of Skill Sets

For example: **UEGSS00007 Basic Gas Supply Industry Work Activities Skill Set**

## Skill Sets in the UEG Gas Industry Training Package

The following Skill Sets are in the UEG Gas Industry Training Package:

Code	Title
UEGSS00007	Basic Gas Supply Industry Work Activities Skill Set
UEGSS00008	Construct and Lay Steel Gas Distribution Mains Skill Set
UEGSS00009	Construct and Lay Nylon or PVC Gas Distribution Mains Skill Set
UEGSS00010	Construct and Lay Polyethylene Gas Distribution Mains Skill Set
UEGSS00011	Construct, Lay and Connect a Gas Distribution Service to Steel Mains Skill Set
UEGSS00012	Construct, Lay and Connect Gas Distribution Service to Plastic Mains Skill Set
UEGSS00013	Basic Hydrogen Safety Skill Set



Code	Title
UEGSS00014	Inject Hydrogen into Distribution Networks Skill Set
UEGSS00015	Monitor Hydrogen using Control Systems Skill Set

## Units of Competency

### Codes and titles

Units of Competency are nationally agreed statements about the skills and knowledge required for effective performance in the workplace. They outline work outcomes as defined by regulatory requirements and agreed by industry.

As such, they identify the skills and knowledge (as outcomes) that contribute to the whole job function – they do not describe how to perform a particular role.

Each Unit of Competency covers a specific work activity, the range of conditions under which the activity is conducted and the foundation skills essential to performance.

The same Unit of Competency (i.e. specific work activity) can be relevant across a range of AQF qualification levels. It is important to check the packaging rules in qualifications to establish how units can apply.

<b>UNIT CODE</b> MANDATORY FIELD	The unit code contains the three alpha characters identifying the Training Package, followed by alpha and/or numeric characters. It must comply with the length specified in the AVETMIS Standard (no more than 12 characters).
<b>UNIT TITLE</b> MANDATORY FIELD	The title concisely describes the unit outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters)

Extract from [Standards for Training Packages](#)

Extract from [Training Package Products Policy](#)

There are mandatory conventions specified in the Standards for Training Packages for the titles and codes used in Training Packages and their components.

The codes are assigned to Units of Competency when the Training Package is endorsed, or when new Units of Competency are added to an existing endorsed Training Package.

Each Unit of Competency has a specific character code where the:

- First three characters identify the Training Package
- Next character/s indicates the competency field
- Numbers identify a unit's position in the sequence of units in the competency field in the Training Package.

For example:

UEGNSG058 Locate, prove and protect utility assets

### Assessment Requirements

Each Unit of Competency has its own assessment requirements that identify the:

- Performance evidence
- Knowledge evidence
- Assessment conditions

<b>TITLE</b> MANDATORY FIELD	Assessment Requirements for [insert Unit of Competency Code and Title]
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The same code is used for the Unit of Competency and its associated assessment requirements.

### Units of Competency in the UEG Gas Industry Training Package

The following Units of Competency are in the UEG Gas Industry Training Package:

Code	Title
UEGNSG002	Apply environmental policies and procedures in the gas supply industry
UEGNSG007	Assess the operational capability of gas safety equipment on a delivery vehicle
UEGNSG008	Assist with the construction and laying of gas distribution mains
UEGNSG009	Assist with the construction, laying and connection of gas distribution services to mains
UEGNSG010	Conduct general excavations
UEGNSG011	Conduct isolations under the permit to work system for gas industry worksites L MSMWHS217 Gas test atmospheres
UEGNSG012	Construct and lay plastic gas distribution mains
UEGNSG013	Construct, lay and connect gas distribution to a main
UEGNSG014	Control industrial gas storage/processing operations
UEGNSG015	Coordinate gas transmission pipeline repairs and modifications
UEGNSG016	Establish right of way access and maintain transmission pipeline easements
UEGNSG017	Fill by weight industrial gas cylinders
UEGNSG018	First on site response to gas pipeline emergencies
UEGNSG019	Inspect, test and maintain gas cylinders
UEGNSG020	Load, unload, exchange and connect industrial gas cylinders

<b>Code</b>	<b>Title</b>
UEGNSG021	Maintain multi-stage, multi-run pressure control devices <ul style="list-style-type: none"> <li>└ UEGNSG040 Use a portable gas detector to locate a combustible gas escape</li> <li>└ UEGNSG022 Maintain single stage, single run pressure control devices</li> </ul>
UEGNSG022	Maintain single stage, single run pressure control devices
UEGNSG023	Manage a utilities industry health, safety and environmental (HSE) management system
UEGNSG024	Monitor and control the transfer of bulk industrial gas
UEGNSG025	Monitor and operate complex flow control, measuring and regulating devices for gas distribution
UEGNSG026	Perform routine maintenance on distribution pipelines and facilities
UEGNSG027	Perform routine maintenance on transmission pipeline facilities and equipment <ul style="list-style-type: none"> <li>└ UEGNSG040 Use a portable gas detector to locate a combustible gas escape</li> <li>└ UEGNSG011 Conduct isolations under the permit to work system for gas industry worksites</li> </ul>
UEGNSG028	Perform scheduled maintenance on gas processing or storage facilities and equipment
UEGNSG029	Process, mix and blend industrial gases
UEGNSG030	Store and handle bulk industrial gases
UEGNSG031	Prepare to work in the gas industry
UEGNSG032	Carry out aerial surveillance of gas transmission pipelines
UEGNSG033	Carry out basic work activities in a gas industry work environment
UEGNSG034	Carry out surveillance of gas transmission pipelines
UEGNSG035	Respond to gas infrastructure emergencies
UEGNSG036	Supervise and monitor contract work
UEGNSG037	Supervise technical operations for gas distribution or transmission

<b>Code</b>	<b>Title</b>
UEGNSG038	Supervise the operation of plant and equipment for the construction of gas transmission pipelines
UEGNSG039	Test new residential and small commercial gas installations
UEGNSG040	Use a portable gas detector to locate a combustible gas escape
UEGNSG041	Apply safe working practices in the gas supply industry
UEGNSG042	Pressure test residential and small commercial gas installations
UEGNSG043	Relight Type A gas appliances
UEGNSG044	Repair and maintain stationary gas fuelled turbine engines
UEGNSG045	Carry out surveillance on gas distribution assets
UEGNSG046	Coat metallic pipelines
UEGNSG047	Compile a gas industry technical report
UEGNSG048	Conduct butt fusion of large diameter polyethylene gas pipeline systems
UEGNSG049	Control excavations in the vicinity of gas transmission pipelines └ UEGNSG058 Locate, prove and protect utility assets
UEGNSG050	Control field pipeline operations
UEGNSG051	Coordinate repair of pipeline, facilities and equipment
UEGNSG052	Establish a utilities infrastructure worksite
UEGNSG054	Install cathodic protection systems
UEGNSG055	Launch and recover PIGs in a gas distribution pipeline
UEGNSG056	Launch and recover PIGs in gas transmission pipelines
UEGNSG057	Liaise with third party and the community to maintain pipeline integrity and community safety
UEGNSG058	Locate, prove and protect utility assets
UEGNSG059	Maintain cathodic protection systems
UEGNSG060	Maintain SCADA controlled flow and pressure equipment and electronic gas measurement equipment

<b>Code</b>	<b>Title</b>
	└ UEGNSG040 Use a portable gas detector to locate a combustible gas escape
UEGNSG061	Monitor and control gas odourisation
UEGNSG062	Monitor and report on cathodic protection systems
UEGNSG063	Operate and maintain gas station water bath heaters
UEGNSG064	Operate and monitor pipeline control systems
UEGNSG065	Install gas flow, measuring and pressure regulating devices └ UEGNSG040 Use a portable gas detector to locate a combustible gas escape
UEGNSG101	Undertake gas leak surveys
UEGNSG102	Prepare safe design specifications of a gas system
UEGNSG103	Install and commission stationary gas fuelled turbine engines └ CPCWHS1001 Prepare to work safely in the construction industry └ HLT AID009 Provide cardiopulmonary resuscitation
UEGNSG201	Conduct distribution pipeline emergency repair
UEGNSG202	Conduct emergency site control on gas distribution assets
UEGNSG203	Evaluate and extinguish gas fire
UEGNSG205	Commission or decommission gas distribution pipelines
UEGNSG206	Construct and lay copper and stainless steel gas distribution pipelines
UEGNSG208	Construct and lay large copper gas distribution pipelines
UEGNSG211	Construct and lay steel gas distribution pipelines
UEGNSG214	Coordinate and conduct gas distribution pipeline repair and modifications
UEGNSG215	Coordinate construction, laying and testing of gas distribution pipelines
UEGNSG229	Prepare simple drawings of as laid gas mains and services
UEGNSG301	Conduct emergency site control on gas transmission assets

Code	Title
UEGNSG302	Conduct transmission pipeline emergency repair
UEGNSG303	Carry out transmission pipeline construction work activities
UEGNSG304	Commission or decommission gas transmission pipelines
UEGNSG306	Control gas processing, storage or regasification operations in an LNG storage facility
UEGNSG307	Coordinate the operation of relevant plant and equipment for transmission pipeline construction
UEGNSG309	Coordinate transmission pipeline construction operations
UEGNSG310	Supervise and monitor contract work
UEGNSG312	Inject gas into underground storage
UEGNSG313	Monitor and operate flow control, pressure measuring and regulating devices for gas transmission <ul style="list-style-type: none"> <li>└ UEGNSG040 Use a portable gas detector to locate a combustible gas escape</li> </ul>
UEGNSG314	Liaise with third party and the community to maintain pipeline integrity and community safety
UEGNSG315	Withdraw gas from underground storage
UEGNSG316	Work in proximity of transmission pipeline construction plant and equipment
UEGNSG317	First response to a gas facility event
UEGNSG326	Coordinate and monitor staff and contractors
UEGNSG330	Coat metallic pipelines
UEGNSG501	Communicate with gas industry stakeholders to meet operational requirements
UEGNSG502	Implement emergency and critical incident response for gas infrastructure incidents
UEGNSG503	Monitor and control field activities
UEGNSG504	Monitor and control gas infrastructure using control centre systems

<b>Code</b>	<b>Title</b>
UEGNSG505	Operate and monitor gas infrastructure to meet nominated demand L MSS402061 Use SCADA systems in operations
UEGNSG509	Remotely monitor and operate gas transmission flow and pressure measuring and regulating devices L MSS402061 Use SCADA systems in operations
UEGNSG701	Disconnect and reconnect data logging equipment
UEGNSG702	Disconnect and reconnect small capacity gas meters
UEGNSG703	Fault find and repair data logging equipment
UEGNSG704	Install and commission data logging equipment
UEGNSG707	Process data logging information
UEGNSG709	Process meter reading information using appropriate technology
UEGNSG710	Read and record meter readings
UEGNSG715	Use data logging equipment
UEGNSG804	Maintain single stage and single run gas flow and pressure control and measuring devices
UEGNSG806	Maintain SCADA controlled flow and pressure equipment and electronic gas measurement equipment L UEGNSG040 Use a portable gas detector to locate a combustible gas escape
UEGNSG901	Apply safety practices, procedures, and compliance standards for handling hydrogen gas
UEGNSG902	Commission, operate and maintain electrolysers
UEGNSG902	Commission, operate and maintain electrolysers
UEGNSG903	Fault find and repair hydrogen storage equipment
UEGNSG904	Inject hydrogen gas into distribution networks
UEGNSG905	Monitor and control hydrogen in gas distribution networks
UEGNSG906	Undertake routine hydrogen storage operations

## QUALIFICATION MAPPING INFORMATION

The qualification mapping information maps the UEG Gas Industry Training Package Release 4.0 qualifications to qualifications in the UEG Gas Industry Training Package Release 3.0.

### **Attachment A: Qualification mapping information**

## SKILL SETS MAPPING INFORMATION

The Skill Sets information maps the UEG Gas Industry Training Package Release 4.0 Skill Sets to Skill Sets in the UEG Gas Industry Training Package Release 3.0.

### **Attachment B: Skill sets mapping information**

## UNIT OF COMPETENCY MAPPING INFORMATION

The Unit of Competency information maps the UEG Gas Industry Training Package Release 4.0 Units of Competency to Units of Competency in the UEG Gas Industry Training Package Release 3.0:

### **Attachment C: Units of Competency mapping information**



## IMPORTED UNITS AND THEIR PREREQUISITE UNITS

The UEG Gas Industry Training Package Training Package includes imported Units of Competency from other Training Packages.

Please check the relevant assessment requirements of the source Training Package by accessing the national training website [www.training.gov.au](http://www.training.gov.au) (TGA) or a physical copy regarding any special conditions that may apply to the assessment of imported Units of Competency.

For up-to-date releases of the imported Units of Competency, refer to [www.training.gov.au](http://www.training.gov.au) or the respective SSO.

Where imported Units of Competency are selected, care must be taken to ensure that all prerequisite Units of Competency specified are complied with.

Code	Title
<b>AVI - Aviation Training Package</b>	
AVIW0006	Perform infrastructure inspections using remote operated systems
<b>BSB - Business Services Training Package</b>	
BSBINS501	Implement information and knowledge management systems
BSBLDR301	Support effective workplace relationships
BSBLDR414	Lead team effectiveness
BSBLDR522	Manage people performance
BSBOPS402	Coordinate business operational plans
BSBOPS404	Implement customer service strategies
BSBOPS502	Manage business operational plans
BSBOPS505	Manage organisational customer service
BSBPEF301	Organise personal work priorities
BSBPEF402	Develop personal work priorities
BSBPEF501	Manage personal and professional development
BSBTWK502	Manage team effectiveness
BSBWHS308	Participate in WHS hazard identification, risk assessment and risk control processes
BSBWHS311	Assist with maintaining workplace safety
<b>CPC - Construction, Plumbing and Services Training Package</b>	
CPCCLDG3001	Licence to perform dogging

<b>Code</b>	<b>Title</b>
CPCCLRG3001	Licence to perform rigging basic level └ CPCCLDG3001 Licence to perform dogging
CPCCLRG3002	Licence to perform rigging intermediate level └ CPCCLRG3001 Licence to perform rigging basic level
CPCWHS1001	Prepare to work safely in the construction industry
CPCPCM4012	Estimate and cost work
<b>CPP - Property Services Training Package</b>	
CPPFES2005	Demonstrate first attack firefighting equipment
<b>HLT - Health</b>	
HLTAID009	Provide cardiopulmonary resuscitation
HLTAID011	Provide First Aid
HLTAID013	Provide First Aid in remote or isolated site
HLTWHS005	Conduct manual tasks safely
<b>ICT - Information and Communications Technology</b>	
ICTICT214	Operate application software packages
<b>MSL - Laboratory Operations</b>	
MSL974019	Perform chemical tests and procedures
MSL975040	Apply routine chromatographic techniques └ MSL974019 Perform chemical tests and procedures
MSL975047	Apply complex instrumental techniques └ MSL974019 Perform chemical tests and procedures
<b>MSM - Manufacturing Training Package</b>	
MSMOPS400	Optimise process/plant area
MSMPER200	Work in accordance with an issued permit
MSMPER201	Monitor and control work permits
MSMPER202	Observe permit work
MSMPER300	Issue work permits └ MSMWHS201 Conduct hazard analysis
MSMPER400	Coordinate permit process └ MSMPER300 Issue work permits
MSMPMC400	Carry out stock control
MSMSUP210	Process and record information
MSMSUP240	Undertake minor maintenance
MSMSUP303	Identify equipment faults
MSMSUP390	Use structured problem-solving tools

<b>Code</b>	<b>Title</b>
MSMWHS201	Conduct hazard analysis
MSMWHS205	Control minor incidents
MSMWHS212	Undertake first response to fire incidents
MSMWHS216	Operate breathing apparatus
MSMWHS217	Gas test atmospheres
<b>MSS - Sustainability</b>	
MSS402061	Use SCADA systems in operations
MSS402080	Undertake root cause analysis
<b>PMA - Chemical, Hydrocarbons and Refining</b>	
PMAOMIR210	Control evacuation to muster point
PMAOMIR346	Assess and secure an incident site
PMAOMIR407	Audit incident preparedness and established response systems
PMAOMIR418	Coordinate incident response
PMAOMIR430	Conduct and assess incident exercises
PMAOMIR444	Develop incident containment tactics
PMAOPS223	Operate and monitor valve systems
PMAOPS315	Operate and troubleshoot process control systems
PMAOPS317	Undertake ship transfer operations
PMAOPS338	Communicate and monitor pipeline activities
PMAOPS346	Operate and troubleshoot liquefaction process
PMAOPS402	Respond to abnormal process situations └ MSMSUP390 Use structured problem-solving tools
PMAOPS405	Operate complex control systems
PMAOPS410	Operate remote production facilities
PMASUP311	Operate communications hub
PMASUP410	Develop plant documentation
PMASUP444	Plan plant preparation and isolation
PMAWHS211	Prepare equipment for emergency response
PMAWHS310	Investigate incidents

<b>Code</b>	<b>Title</b>
PMAWHS311	Lead emergency teams
<b>PMB - Plastics, Rubber and Cablemaking</b>	
PMBWELD301E	Join polyethylene plastic pipelines using butt welding
PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding
<b>RII - Resources and Infrastructure Industry Training Package</b>	
RIICCM205F	Carry out manual excavation
RIICCM206E	Support plant operations
RIICCM207E	Spread and compact materials manually
RIICCM208E	Carry out basic levelling
RIICCM210E	Install trench support
RIIMPO319E	Conduct backhoe/loader operations
RIIMPO320F	Conduct civil construction excavator operations
RIISAM201E	Handle resources and infrastructure materials and safely dispose of nontoxic materials
RIIWHS202E	Enter and work in confined spaces
RIIWHS204E	Work safely at heights
RIIWHS302E	Implement traffic management plans
<b>TLI - Transport and Logistics Training Package</b>	
TLIB0002	Carry out vehicle inspection
TLIC0003	Operate LP gas tanker └ TLILIC0001 Licence to transport dangerous goods by road
TLID0014	Load and unload explosives/dangerous goods
TLID0016	Operate a forklift
TLID0018	Prepare for transport of dangerous goods
TLID0021	Store and handle dangerous goods and hazardous substances
TLID2010	Operate a forklift
TLID3023	Use specialised liquid bulk gas transfer equipment
TLID3036	Lift and move load using a mobile crane
TLIF0012	Implement and coordinate accident-emergency procedures
TLIF0014	Monitor the safety of transport activities (Chain of Responsibility)

<b>Code</b>	<b>Title</b>
TLIF0021	Administer the implementation of fatigue management strategies
TLIF2006	Apply accident-emergency procedures
TLIF2010	Apply fatigue management strategies
TLIF2012	Apply safe procedures when handling/transporting dangerous goods or explosives
TLIF3096	Carry out emergency response to a dangerous goods incident
TLIF4065	Ensure compliance with Australian Dangerous Goods Code
TLIF4066	Implement and supervise transport regulations compliance systems
TLIL4059	Implement asset management systems
TLILIC0001	Licence to transport dangerous goods by road
<b>UEE - Electrotechnology Training Package</b>	
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace
UEECD0024	Implement and monitor energy sector WHS policies and procedures
UEECO0002	Maintain documentation
<b>UEP - Electricity Supply Industry - Generation Sector Training Package</b>	
UEPMNT367	Install and commission stationary gas fuelled reciprocating engines <ul style="list-style-type: none"> <li>└ CPCCWHS1001 Prepare to work safely in the construction industry</li> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul>
UEPMNT368	Repair and maintain stationary gas fuelled reciprocating engines <ul style="list-style-type: none"> <li>└ CPCCWHS1001 Prepare to work safely in the construction industry</li> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul>
UEPOPS085	Operate and monitor communications system
UEPOPS092	Operate and monitor fixed fire protection systems
UEPOPS059	Manage, operate and monitor a gas turbine unit
UEPOPS107	Operate and monitor supervisory, control and data acquisition systems
<b>UET - Transmission, Distribution and Rail Sector</b>	
UETTDREL006	Working safely near live electrical apparatus as a non-electrical worker

## KEY WORK AND TRAINING REQUIREMENTS IN THE INDUSTRY

The gas sector in Australia was predicted to add \$4.51 billion to the Australian economy in 2018–19. The industry employs more than 14,000 in the following four sub-sectors:

- Industrial gas bottling and storage
- Retailing of gas
- Transmission of gas
- Distribution of gas.

Vocational education and training is required for occupations involved in:

- Transmission and distribution of natural gas
- Handling and packaging of LPG at terminals.

The employment level for the gas supply industry sector reached a peak of approximately 18,100 during 2014 and declined between 2014 and 2019. Employment levels increased between 2019 and 2020, from 9,100 in 2019 to 15,800 in 2020. The level is projected to decrease to 8,600 over the next four years until 2024.

There were less than 450 program enrolments in the UEG Gas Industry Training Package during 2019 and approximately 100 program completions. Program enrolments remained fairly steady between 2015 and 2017 but declined slightly in 2018 and sharply in 2019. Program completions declined sharply between 2015 and 2016 and have steadily decreased between 2016 and 2019. The majority of training was for the Certificate III in Gas Supply Industry Operations (79%) and was for the intended occupation of Gasfitter. The proportion of subjects delivered as part of a nationally recognised program has gradually decreased over the past five years, with 96% in 2015 declining to 30% in 2019.

Most of the enrolments were with private training providers (90%). The funding source for subjects was split between Commonwealth and state funding (56%) and domestic fee for service (44%). Fifty-two per cent of students who enrolled during 2019 were from Victoria, with a further 40% from New South Wales and 5% from Queensland.

Just over half of all training was delivered in Victoria (52%), followed by 41% in New South Wales and 4% in Queensland.

Apprenticeship and traineeship commencements in the UEG Gas Industry Training Package were generally less than 100 between 2010 and 2019, apart from approximately 150 commencements in 2010 and close to 510 commencements in 2015. Completions were similarly less than 100 over the period apart from 2015 (260 completions). Commencements reduced by half between 2018 and 2019 (approximately 40 and 20 respectively). The majority of apprentices and trainees were training towards the intended occupation of Gasfitter. In 2019, 57% of apprenticeships and traineeships were reported in Victoria, followed by New South Wales (23%) and Queensland (11%). (source: [National Industry Insights](#))

The UEG Gas Industry Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in the construction, operation and maintenance of gas supply pipeline networks and gaseous fuel storage and distribution.

To download 2020 Gas IRC Skills Forecast please click [here](#).

## REGULATION AND LICENSING IMPLICATIONS FOR IMPLEMENTATION

The gas industry is subject to regulation and codes of practice related to the supply of natural gas and industrial gases and the operation of equipment and apparatus in the supply of such services. The regulations and codes of practice are based on principles of the supply of natural gas and industrial gases involving equipment, apparatus and systems, public safety, safety and health of individuals who work on systems and apparatus/equipment and other codes and practices related to the environment in which they are installed and maintained.

Units of Competency in this Training Package have been developed in consultation with the relevant industry technical and business regulators so that, where appropriate, these align to the requirements of legislation, regulations and mandated codes of practice.

Licensing and regulatory authorities will recognise a range of Units of Competency contained within this Training Package for respective licensing, registration or accreditation purposes.

Attachment F contains a Summary of qualification licensing and regulatory information

## IMPLEMENTATION INFORMATION

### KEY FEATURES OF THE TRAINING PACKAGE AND THE INDUSTRY THAT WILL IMPACT ON THE SELECTION OF TRAINING PATHWAYS

Pathways define a sequence of learning or experience that can be followed to attain competency and describe the way in which training and assessment is undertaken in an education or training program. They are **not mandatory** and may vary depending on the qualification or training program, the needs of the individual and the industry.

The UEG Gas Industry Training Package is flexible and there are many ways that pathways can be constructed to align with individual requirements and business needs. RTOs can work with their clients to apply the flexibility available in the packaging rules to ensure 'fit for purpose outcomes'.

The UEG Gas Industry Training Package also contains Units of Competency imported from other Training Packages to enable organisations with broader needs to ensure qualifications are relevant to their operation.

### INDUSTRY SECTORS AND OCCUPATIONAL OUTCOMES OF QUALIFICATIONS

The UEG Gas Industry Training Package does not lead to a licence, however, various State and Territory Training Authorities (STAs) have their own regulatory requirements for

licensing. The UEG Gas Industry Training Package contains four qualifications comprising 113 industry-specific Units of Competency aligned to the occupations below:

## Industry Occupations Guide

Qualification		Occupation	
UEG20122	Certificate II in Gas Supply Industry Operations	Gas Meter Reader	Gas Meter Readers take and record gas meter readings and input and retrieve data using industry-specific technology. They read utilities meters on pipelines, associated facilities and control centres.
UEG20122	Certificate II in Gas Supply Industry Operations	Gas Pipeline Worker	Gas Pipeline Workers develop gas transmission pipeline infrastructure and lay utilities distribution infrastructure (including pipelines).
UEG20122	Certificate II in Gas Supply Industry Operations	Gas Industry Worker (Cylinder Distribution)	Gas Industry Workers (Cylinder Distribution) check, test, maintain and fill gaseous fuel cylinders. They store, handle, load and transport gaseous fuel cylinders in accordance with Australian standards.
UEG20122	Certificate II in Gas Supply Industry Operations	Utilities Industry Worker (Transmission Laying)	Utilities Industry Workers (Transmission Laying) construct and lay gas, water and wastewater pipelines for utilities networks. They may lay new networks, or rearrange existing pipeline systems. They use plant to excavate for underground utilities services.
UEG20122	Certificate II in Gas Supply Industry Operations	Gas Industry Worker (Transport)	Gas Industry Workers (Transport) drive gaseous fuel tankers and monitor on-board safety equipment. They maintain safe handling procedures and conduct operational checks.
UEG30122	Certificate III in Gas Supply Industry Operations	Gas Industry Operator (Support Services)	Gas Industry Operators (Support Services) coordinate the work in the billing area of a gas company. They may also analyse meter readings, produce bills, and handle complex customer enquiries.



Qualification		Occupation	
UEG30122	Certificate III in Gas Supply Industry Operations	Gas Industry Operator (Systems Operations/Pressure Centre)	Gas Industry Operators (Systems Operations/Pressure Centre) install, monitor and operate complex flow control, measuring and regulating devices for gas pressure control.
UEG30122	Certificate III in Gas Supply Industry Operations	Gas Industry Operator (Cathodic Protection)	Gas Industry Operators (Cathodic Protection) install and maintain cathodic protection systems to help protect metal pipelines and storage systems from corrosion.
UEG30122	Certificate III in Gas Supply Industry Operations	Gas Industry Operator (Distribution/Transmission)	Gas Industry Operators (Distribution/Transmission) coordinate the distribution and transmission of gas, including pipeline commissioning/decommissioning, and the repair, maintenance and construction of gas pipelines.
UEG40222	Certificate IV in Gas Supply Industry Operations	Gas Control Operator	Gas Control Operators monitor and control natural gas within transmission, distribution, storage and gathering systems, and respond to routine and emergency situations using a wide range of industry response procedures and systems.
UEG40222	Certificate IV in Gas Supply Industry Operations	Gas Pipeline Supervisor	Gas Pipeline Supervisors oversee the maintenance of gas pipelines. They patrol pipelines, respond to emergencies and oversee work undertaken on or around gas pipelines.
UEG40222	Certificate IV in Gas Supply Industry Operations	Gas Industry Operations Supervisor (Control Centre)	Gas Industry Operations Supervisors oversee centres which monitor and control gas storage and distribution. They supervise and coordinate operations and communications in network control centres.
UEG40222	Certificate IV in Gas Supply Industry Operations	Gas Industry Operations Supervisor (Transmission/Distribution)	Gas Industry Operations Supervisors (Transmission/Distribution) coordinate operations and supervise staff in the transmission/distribution sector of the gas industry. They may oversee pipeline or gaseous fuel tanker operations.

Qualification		Occupation	
UEG40222	Certificate IV in Gas Supply Industry Operations	Gas Industry Operations Supervisor (Storage/Processing)	Gas Industry Operations Supervisors (Storage/Processing) supervise and coordinate storage and processing activities. They conduct isolation procedures for worksites, supervise technical operations for liquefied petroleum gas storage and processing, and may supervise staff.
UEG50122	Diploma of Gas Supply Industry Operations	Gas Technical Officer	Gas Technical Officers manage a variety of procedural and operational activities covering the installation, maintenance and diagnostics of distribution and transmission gas pipelines. They may manage gas system projects, physical resources and WHS/OHS systems, and promote continuous improvement.

## QUALIFICATIONS ENTRY REQUIREMENTS

Entry requirements are the knowledge, skills or experience required to enter a qualification. They may be expressed as Units of Competency, qualifications or vocational outcomes and **must** be demonstrated prior to commencing the qualification.

There are no entry requirements for the UEG Gas Industry Training Package qualifications.

## PATHWAYS ADVICE

Generally, all qualifications in the UEG Gas Industry Training Package are suitable for delivery via an Australian Apprenticeship pathway.

The [AUSTRALIAN APPRENTICESHIPS](#) website offers information about traineeships and apprenticeships and includes links to State and Territory Training Authorities (STAs) that monitor provision. The [AUSTRALIAN APPRENTICESHIPS PATHWAYS](#) website is also a useful website for people considering career options, employers looking at recruitment and those providing support and advice.

Australian school-based apprenticeships, also known as school-based apprenticeships and traineeships, are similar to any apprenticeship or traineeship but commenced part-time as part of secondary schooling.

The following qualifications have been identified as being suitable for Australian school-based apprenticeships:

- Certificate II in Gas Supply Industry Operations

- Certificate III in Gas Supply Industry Operations

The Australian Qualification Framework provides a comprehensive, nationally consistent framework for qualifications in compulsory post-education and training in Australia. The framework helps to provide consistency in the VET sector for all trainees, learners, employers and providers by enabling recognition of qualifications and Statements of Attainment. The framework enables learners to have flexible pathways than can cover more than one provider, pathways that are horizontal (across AQF qualifications at the same level) and vertical (between qualifications at different levels), and eliminates unnecessary and unfair barriers to AQF qualifications. Assessment by any pathway must comply with the assessment requirements associated with UEG Gas Industry Training Package Units of Competency and the Standards for RTOs.

None of the qualifications in the UEG Gas Training Package contain entry requirements. Whilst learners can start from any level of qualification, Certificate II in Gas Supply Industry Operations is generally considered as the entry level for those wanting to have a career in the gas industry. Whilst the Certificate II qualification provides skills required for working in transmission, distribution pipeline and cylinder operations and functions, Certificate III in Gas Supply Industry Operations is a step up in skills development and provides competencies to conduct gas supply industry activities, including installation, maintenance, fault find and repair, operations of distribution and transmission gas pipelines, cylinders and associated equipment.

Certificate IV in Gas Supply Industry Operations is typically considered as the industry benchmark as it provides competencies to supervise and conduct gas supply industry activities, including installation, diagnostics and maintenance of distribution and transmission gas pipelines, cylinders and associated equipment.

Diploma of Gas Supply Industry Operations has been designed to provide competencies to manage gas supply industry activities, including management of projects covering the installation, diagnostics and maintenance of distribution and transmission gas pipelines and associated equipment.

The qualifications in the UEG Gas Industry Training Package are also designed to allow flexible movement across sectors, with the inclusion of imported Units of Competency from other Training Packages, such as MEM Manufacturing and Engineering, MSM Manufacturing Training Package and PMA Chemical, Hydrocarbons and Refining. The Training Package also supports Recognition of Prior Learning and therefore supports the fluidity of job roles in an everchanging industry environment.

### **Unit of Competency Selection Guidance for Gas Controllers for Certificate IV in Gas Supply Industry Operations**

The amendments to the packaging rule for UEG40222 Certificate IV in Gas Supply Industry Operations has removed previous barriers that existed to Gas Controllers effectively using previous versions of the Certificate IV in Gas Supply Industry Operations. This has enabled

UEG40221 Certificate IV in Gas Supply Industry Operations and UEG40120 Certificate IV in Gas Control Operations to be merged.

The following is guidance for Gas Controllers regarding the most applicable Unit of Competency selection choices for that job role.

Under the packaging rules a total of 19 Units of Competency comprising:

- 5 core units listed below, plus
- 1 unit from Group A Workplace safety elective units, plus
- 6 gas elective units from Group B Gas elective units, plus
- 4 imported elective units from Group C Imported elective units, and
- the remaining 3 elective units may be selected from Group B Gas or Group C Imported elective groups or with appropriate contextualisation from a qualification in this or any endorsed Training Package, provided selected units contribute to the vocational outcome of the qualification.

The following are the recommended Units of Competency elective options for Gas Controllers undertaking the Certificate IV in Gas Supply Operations.

#### **Group A - Workplace Safety**

UEECD0024 Implement and monitor energy sector WHS policies and procedures (appropriate for Gas Controllers with staff supervisory responsibilities)

BSBWHS311 Assist with maintaining workplace safety (appropriate for Gas Controllers without staff supervisory responsibilities)

#### **Group B - Gas elective units**

UEGNSG031 Prepare to work in the gas industry

UEGNSG033 Carry out basic work activities in a gas industry work environment

UEGNSG035 Respond to gas infrastructure emergencies

UEGNSG050 Control field pipeline operations

UEGNSG057 Liaise with third party and the community to maintain pipeline integrity and community safety

UEGNSG060 Maintain SCADA controlled flow and pressure equipment and electronic gas measurement equipment

UEGNSG501 Communicate with gas industry stakeholders to meet operational requirements

UEGNSG502 Implement emergency and critical incident response for gas infrastructure incidents

UEGNSG503 Monitor and control field activities

UEGNSG504 Monitor and control gas infrastructure using Control Centre systems

UEGNSG509 Remotely monitor and operate gas transmission flow and pressure measuring and regulating devices

### **Group C – Imported Elective Units**

BSBLDR301	Support effective workplace relationships
BSBOPS404	Implement customer service strategies
MSMPER201	Monitor and control work permits
MSMPER300	Issue work permits
MSMWHS201	Conduct hazard analysis
MSS402061	Use SCADA systems in operations

## CREDIT ARRANGEMENTS

Currently there are no credit transfer arrangements between qualifications in this Training Package and higher education qualifications.

## ACCESS AND EQUITY

Good vocational education and training, and assessment include making adjustments to meet the learning and assessment needs of individuals. An open mind, common sense and tailoring training and assessment to individual circumstances should ensure individuals achieve the standards employers and RTOs expect.

Adjustments can be made to assist learners to access and participate in vocational education and training. Adjustments are reasonable if they achieve this purpose and take into account factors such as the nature of the learner's ability and disability, the views of the learner, the potential effect of the adjustment on the learner and others, and the costs and benefits of making the adjustment.

Reasonable adjustments need only be that – reasonable. It is about identifying what adjustments might reasonably be made and how they may be put into place.

Assessment processes and techniques should be modified for distance-based learners, be culturally appropriate and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

## FOUNDATION SKILLS

Language, literacy and numeracy skills can make the difference between whether or not someone succeeds in training and at work. These important skills are now called ‘core skills’ or ‘foundation skills’ because they are at the core of – or the foundation to – other more specific technical skills.

All Units of Competency in UEG Gas Industry Training Packages clearly describe the foundation skills that are essential to performance in the elements and performance criteria of the unit.

There is a distinction between ‘core skills’ and ‘foundation skills’ in Training Packages, which can be summarised as follows:

- **Core skills** are those described in the ACSF: learning, numeracy, oral communication (speaking and listening), reading and writing.
- **Foundation skills** is the term that the Australian Government uses in a number of different contexts, including vocational Units of Competency, to capture language, literacy and numeracy skills and employment skills.

In the UEG Gas Industry Training Package, foundation skills are explicit in the performance criteria in each Unit of Competency.

This is achieved with the use of key words or phrases to indicate foundation skills that are essential to performance. It is important to note that foundation skills may not have the same meaning in every instance and do need to be considered in the relevant job context.

The significance of each of these skills will also vary in respect to job roles and the strengths of individuals. It is important for users of the Training Package to contextualise relevant foundation skills identified in Units of Competency and assessment criteria.

## FSK Foundation Skills Training Package

The FSK Foundation Skills Training Package allows RTOs to choose and deliver foundation skills units, qualifications and Skill Sets that will enable learners to build the specific foundation skills they need to achieve vocational competency.

Foundation skills units provide additional information about the types of language, literacy and numeracy skills that are needed to meet the requirements of vocational units.

The Training Package can be downloaded from [www.training.gov.au](http://www.training.gov.au).

## HEALTH AND SAFETY IMPLICATIONS IN THE INDUSTRY

Work health and safety (WHS)/occupational health and safety (OHS) has been used in Units of Competency to refer to the relevant legislation. As not all jurisdictions have implemented the Model Work Health and Safety (WHS) Act the combined term is used to recognise that either the national model or existing state instrument will apply, as specified by the relevant regulatory authority.

In jurisdictions where the Model WHS Act has not been implemented, RTOs are advised to contextualise the Unit of Competency by referring to the existing state/territory OHS legislative requirements.

## RESOURCES AND EQUIPMENT RELEVANT TO THE TRAINING PACKAGE

The assessment requirements relevant to each Unit of Competency refer to the relevant resources and equipment required for assessment.

Where a specific vehicle or piece of equipment is referred to, it must be used in the relevant assessment.

In particular, for assessment, access is required to:

- A range of relevant exercises, case studies and/or simulations
- A vehicle typical of that used in the industry
- Applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- Relevant materials, tools, equipment and personal protective equipment (PPE) currently used in industry.

Specific assessment requirements and strategies are defined in the relevant unit where applicable.

RTOs can only conduct training and/or assessment of the qualifications and/or Units of Competency in this Training Package provided they are covered by their Scope of Registration.

The assessment requirements for each Unit of Competency specify the relevant resources and equipment required to achieve the vocational outcomes of the UEG Gas Industry Training Package.

## LEGAL CONSIDERATIONS FOR LEARNERS IN THE WORKPLACE/ON PLACEMENTS

Legal requirements that apply to specific industries and VET vary across each state and territory, and the Commonwealth, and can change.

Contact relevant state/territory and Commonwealth departments to determine specific legal requirements.

## LINKS

Companion Volume Implementation Guide (CVIG) for UEG Gas Industry Training Package

### **ATTACHMENT A: QUALIFICATION MAPPING**

Mapping information for Qualifications can be found in the UEG Gas Industry Training Package CVIG Mapping Information [Attachments A-C spreadsheet](#).

### **ATTACHMENT B: SKILL SETS MAPPING**

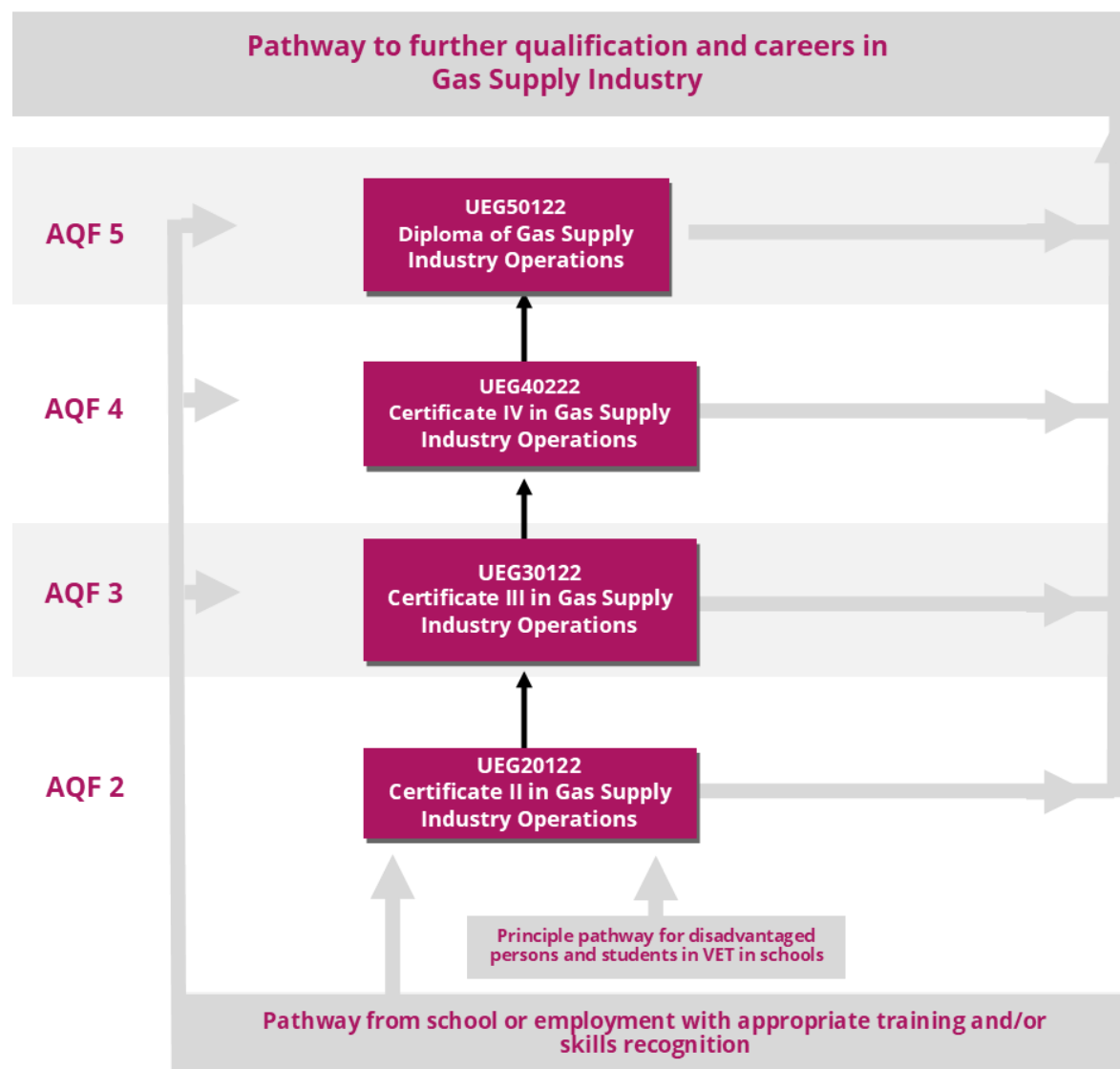
Mapping information for Skill Sets can be found in the UEG Gas Industry Training Package CVIG Mapping Information [Attachments A-C spreadsheet](#).

### **ATTACHMENT C: UNITS OF COMPETENCY MAPPING**

Mapping information for Units of Competency can be found in the UEG Gas Industry Training Package CVIG Mapping [Information Attachments A-C spreadsheet](#).



## ATTACHMENT D: QUALIFICATIONS PATHWAY ADVICE CHART



### AQF Pathways Outcomes

- AQF 5 Contributes to requirements for employment in senior technical and managerial roles in the gas supply industry.
- AQF 4 Contributes to requirements for employment in advanced operations and supervisory positions in the gas supply industry.
- AQF 3 Contributes to requirements for employment operational/trade positions in the gas supply industry.
- AQF 2 Suitable for entry level roles into the gas supply industry. Suitable for VET in school programs.

## ATTACHMENT E: SKILLSETS PATHWAY CHART

Code	Title	Pathways Information
UEGSS00007	Basic Gas Supply Industry Work Activities	This skill set provides credit towards: UEG20122 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00008	Construct and Lay Steel Gas Distribution Mains	This skill set provides credit towards: UEG20122 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00009	Construct and Lay Nylon or PVC Gas Distribution Mains	UEG20122 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00010	Construct and Lay Polyethylene Gas Distribution Mains	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00011	Construct, Lay and Connect a Gas Distribution Service to Steel Mains	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00012	Construct, Lay and Connect Gas Distribution Service to Plastic Mains	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00013	Basic Hydrogen Safety	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00014	Inject Hydrogen into Distribution Networks	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations

Code	Title	Pathways Information
		UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations
UEGSS00015	Monitor Hydrogen using Control Systems	This skill set provides credit towards: UEG20121 Cert II in Gas Supply Industry Operations UEG30122 Cert III in Gas Supply Industry Operations UEG40222 Cert IV in Gas Supply Industry Operations UEG50122 Diploma of Gas Supply Industry Operations

## ATTACHMENT F: SUMMARY OF QUALIFICATION LICENSING/REGULATORY INFORMATION

Licensing and registration requirements that apply to specific industries and VET, vary between each state and territory, and can regularly change.

Contact details for the main relevant state or territory authorities that can assist in providing the most up to date information are listed below.

The regulatory authorities for the UEG Gas Industry Training Package at the time of publication are listed below.

Jurisdiction	Regulatory Body	Contacts
Australian Capital Territory	ACT Accreditation and Registration Council	02 6205 7091
New South Wales	Vocational Education and Training Accreditation Board, NSW	13 77 88
Northern Territory	NT Department of Education and Training	08 8901 1339
Queensland	QLD Training and Employment Recognition Council	07 3237 9959 07 3222 2775
South Australia	SA Training and Skills Commission	08 8226 4359
Tasmania	Tasmanian Qualifications Authority (TQA)	03 6233 6354
Victoria	Victorian Registration and Qualifications Authority (VRQA)	03 9637 2806
Western Australia	WA Training Accreditation Council	08 9441 1910

# ATTACHMENT G: COMPANION VOLUME IMPLEMENTATION GUIDE

## QUALITY ASSURANCE PROCESS

A CVIG is initiated in accordance with the requirements of the National Skills Standard Council (NSSC) Standards for Training Packages and is located within the CVIG.

The steps in the Quality Assurance (QA) process as they apply to the CVIG are:

1. The CVIG is developed by the Industry Skills Specialist (ISS) in accordance with Standards 11 and 12 (NSSC Standards for Training Packages):
  - **Standard 11:** A quality assured Companion Volume Implementation Guide produced by the Training Package developer is available at the time of endorsement and complies with the Companion Volume Implementation Guide template
  - **Standard 12:** Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required
2. Content is validated and amended as part of the validation stage in the implementation of the Standards.
3. The CVIG is submitted for external QA with the Training Package changes, to ensure it is available at the time of endorsement.
4. As the implementation of the Standards continues for the Training Package, the CVIG is reviewed by the ISS to ensure mapping tables are updated and any additional information is added as required. Proposed changes are subject to industry validation as part of the Endorsement process.
5. Where changes are made to a Training Package and minor amendments are required for the CVIG, the ISS includes amendments as part of the validation phase and incorporates the reference in the version control modification history at the front of the CVIG.

# ATTACHMENT H: COMPANION VOLUME IMPLEMENTATION GUIDE TEMPLATE

## COMPANION VOLUME IMPLEMENTATION GUIDE FOR UEG GAS INDUSTRY TRAINING PACKAGE

Mandatory field

### OVERVIEW INFORMATION

Mandatory field

- Version control and modification history.
- List of AQF qualifications, Skill Sets and Units of Competency in the Training Package.
- Unit mapping information, including equivalence table linking old to new Units of Competency.
- Qualification mapping information, including equivalence table linking old to new qualification.
- List of imported and prerequisite units in the Training Package.
- Key work and training requirements in the industry.
- Regulation and licensing implications for implementation.

### IMPLEMENTATION INFORMATION

Mandatory field

- Information on the key features of the Training Package and the industry that will impact on the selection of training pathways.
- Industry sectors and occupational outcomes of qualifications.
- Explanation of any mandatory entry requirements for qualifications.
- Pathways advice, particularly in line with requirements of the AQF Pathways Policy.
- Access and equity considerations.
- Foundation Skills.
- Advice on any health and safety implications in the industry.
- Resource and equipment lists relevant to the Training Package.
- Legal considerations for learners in the workplace/on placements.
- Other information relevant to implementation of the Training Package.

### LINKS

Optional field

- Resources supporting the companion volume implementation guide.
- Other companion volumes as required including:
  - Learning strategies guidance, describing the diversity of learners and learning strategies.
  - Knowledge guidance, identifying contextual information such as knowledge requirements and resources.
  - Assessment strategies, providing guidance on implementation of assessment requirements.
- Training Package developer's quality assurance process for companion volumes.

