



Government of **Western Australia**
Department of **Commerce**
EnergySafety

Guidelines for Gas Safety Training

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EnergySafety
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Recognition of training

It is EnergySafety policy that, where available, training be in accordance with national competencies.

To obtain recognition of the training package or course by the Director of Energy Safety for licensing purposes, a trainer needs to provide a written submission, detailing the training to be provided, to the Director of Energy Safety for consideration and endorsement.

Without the endorsement of the Director of Energy Safety, training packages or course will not be adequate for the issuing of a licence.

The submission must:

- Identify the training package/course outline and which class of gasfitting the training is intended to cover.
- List the competency units the training will cover. This list must be consistent with the EnergySafety licensing requirements and any agreements between EnergySafety and the Training Authority.
- Identify where the training topics and essential requirements listed in the guidelines will be covered in the training. Provide competency to equated requirement mapping.
- Identify the qualifications of the presenter and technical ability to deliver the training.
- Provide a list of training resources which will be used by trainees to obtain each of the gas competencies.
- Provide assessments - theory and practical; how will the student be assessed both theoretically and in the workplace or through workplace simulation. For written theory assessments supply papers with answers. Provide, where applicable, a copy of the quality delivery and assessment strategy (QDAS) document and assessment flow chart.
- Provide a reporting process (documentation that will be given at the end of the training package/course) which will state the competencies attained and the class/type of licence for which a trainee can apply. EnergySafety has recommended proformas.

For a training package/course designed to obtain a licence, a co-examiner acceptable to EnergySafety may need to be nominated to review the assessment of the trainee. This would normally take place after the Director of Energy Safety has endorsed the training.

EnergySafety reserves the right to review the delivery of training at any stage and accept or reject a qualification issued by an EnergySafety recognised training provider.

National Competencies

National competencies, where available, must be used as part of a training package, but they will need to include, or be supplemented to include, all of the listed applicable Training Subjects.

Minimum literacy and numeracy requirements

For public safety and to ensure gas fitters can meet the technical standards required minimum literacy and numeracy standards must be met before a person can be deemed competent to carryout gasfitting work. Once the training provider issues the student with the agreed document identified in the training recognition process the student may be issued with a gasfitting permit. The applicant for a gasfitting permit or authorisation must have sufficient literacy and numeracy skills so that they are, in the workplace, able to independently:

- (a) read, interpret and apply regulations, industry codes, standards, and manufacturers' installation instructions;
- (b) duly complete the administration requirements of the Regulations. This includes, but is not limited to Notices of Completion and compliance badges; and
- (c) correctly calculate ventilation requirements, correctly size flueing, correctly size piping systems, and correctly plan a gas installation.

Reasonable adjustments may be made to the assessment process to meet the needs of individual applicants, but shall not reduce the minimum requirements set out in this guideline.

Assessment

Each trainee will be required to demonstrate to the trainer/assessor that they have achieved adequate knowledge of gas safety and its application in the workplace.

Assessment methodology

The assessment of the principals of gas safety is established in a number of ways; verbal or written questions and answers. As a minimum, the trainee must demonstrate a fundamental understanding of gas safety principles and its application in the workplace. They must be able to demonstrate the ability to differentiate between safe and unsafe situations in relation to fuel gases and consumers' gas installations. The trainee must be able to demonstrate how corrective action can be taken to ensure the safety of the worker, consumer and installation where an unsafe gas incident occurs.

Gas Safety Training

Courses based upon these guidelines must adequately address legal and technical gas safety requirements in Western Australia, including those contained in legislation.

To satisfy the licensing requirements of the *Gas Standards Act 1972* and its regulations, delivery and assessment must ensure successful trainees receive training in relation to the gasfitting tasks covered and can adequately demonstrate their skills and knowledge.

The target audience for this training may include people who are, or will be, involved in the construction, installation, repair or maintenance of a consumer's gas installation and who have a legal or other obligations to their employer, employee, customer or statutory authority to ensure the safety of the installation and compliance with the Act and its regulations.

Training providers may base their course on the regulations and the current edition of Energy Safety's publication "Guidelines for Safe Working with Gas in Consumers' Installations".

Trainees shall, at the end of training, be able to demonstrate a basic working knowledge of gas safety. In particular they must be able to:

- state which act and regulations deal with a consumer's gas installation;
- identify the authority responsible for ensuring compliance with the *Gas Standards Act 1972* and its regulations;
- state the typical safety hazards associated with fuel gases associated with the following:
 - leaks;
 - vapour;
 - liquid;
 - storage;
 - handling;
 - use;
- state appropriate responses to hazards;
- commission (put into service) gas installations/appliances;
- de-commission (take out of service) gas installations/appliances;
- state the obligations of a gas fitter;
- state the responsibilities of others under the regulations; and
- state the requirements for the reporting of gas incidents.

Scope

This document applies to work on Natural Gas (NG), Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LP Gas) installations.

Site or Enterprise Safety Training

Where gas safety training is for a specific site or operation, then a risk analysis needs to be conducted by the owner/operator of the gas installation. Procedures for dealing with identified hazards and emergencies must be incorporated into the training plan. Where necessary, procedures and manuals for the safety management of the gas installation must be developed, continually reviewed and updated. All workers must undertake gas safety training both general and specific before any work is carried out on gas plant, appliances or equipment.

All registered gas fitters are required to have an understanding of basic combustion and exhaust principles. It is recommended that all workers associated with the construction, maintenance or operation of a gas installation undertake a course in basic combustion and exhaust principles.

Training should be considered from two aspects:

1. Safety training for registered gas fitters
2. Training for non – gas fitters

Training for Registered Gas Fitters

Where necessary, gas fitters currently registered with the licensing authority will require gas safety training associated with the tasks they are required to perform. A risk analysis must be conducted to identify any competency gap between the gas fitters qualifications and the task to be done. Gap training to meet the specific needs of the site or operation must be undertaken before commencing any gasfitting work. This applies to both permit holders (independently licensed) and authorisation holders (who carry out and/or supervise the work done by supervised gas fitters for their employer).

Specific Safety Training

Training will depend on the task the worker is undertaking. A basic understanding of gas safety may be all that is required. However, for those people working under the supervision of an authorisation holder, gas safety training may be equivalent to or in some instances better than the registered gas fitter.

Risk Analysis

It is recommended that a risk analysis be carried out on all industrial gas installations or for work on consumer gas piping operating above 200 kPa or any work associated with Type B gas appliances. Also, where an authorisation is issued, before any work is carried out under the authorisation, a risk analysis must be undertaken.

A risk analysis should consider the following:

- the gas installation and or operation;
- any tasks to be performed on or in the vicinity of gas equipment;
- the competence of the person performing the task;
- regulatory requirements;
- associated hazards;
- isolation process / safety shut down;
- emergency procedures.

A competent person should carry out a risk analysis.

Introduction to the Requirements for Gasfitting and Consumers' Gas Installations

The following gas safety training is one of three pre-requisites for obtaining a WA gasfitting permit or authorisation. This training will have to be completed before undertaking further training to obtain a specific class of gasfitting.

“Gas Safety”

Training Subjects:

- Legislation.
 - The authority for the licensing of workers.
 - Requirements for the reporting of gas incidents.
- Definitions.
 - Gasfitting.
 - Gas installation.
 - Consumer.
 - Authority.
- Specific Responsibilities.
 - Gas fitter.
 - Worker.
 - Employer.
 - Owner/operator of gas appliances.
- Gas Safety.
 - Danger of leaking gas.
 - Procedure for detecting gas leaks.
 - Safe handling and use of retailed fuel gases.
 - Health hazards.
 - Hazards of incomplete combustion.
 - Hazards of carbon monoxide.
 - Ventilation.
 - Commissioning.
 - Decommissioning.

Information

EnergySafety reserves the right to reject any training package/course that it considers as not meeting an acceptable licensing outcome.

For further information, contact the Principal Engineer Gas Utilisation.

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