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| <b>Title</b> | <b>Demonstrate knowledge of the installation and commissioning of electrically controlled gas appliances and equipment</b> |                |           |
| <b>Level</b> | <b>4</b>   | <b>Credits</b> | <b>10</b> |

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| <b>Purpose</b> | <p>This unit standard is for people who work in the gasfitting industry.</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li>– the installation of electrically controlled gas appliances and equipment;</li> <li>– commissioning electrically controlled gas appliances and equipment; and</li> <li>– regulatory requirements, and underpinning concepts and principles, as applied to the installation, commissioning, and maintenance of electrically controlled gas appliances and equipment.</li> </ul> |
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| <b>Classification</b> | Plumbing, Gasfitting and Drainlaying > Gasfitting |
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| <b>Available grade</b> | Achieved |
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## Guidance Information

- 1 References
- Building Act 2004;  
 Electricity Act 1992;  
 Gas Act 1992;  
 Gas (Safety and Measurement) Regulations 2010;  
 Health and Safety at Work Act 2015;  
 Plumbers, Gasfitters, and Drainlayers Act 2006;  
 Plumbers, Gasfitters, and Drainlayers Regulations 2010;  
 The following standards, which are available at <http://www.standards.govt.nz>:  
 AS/NZS 5601.1:2013 *Gas installation*,  
 AS/NZS 5601.2:2013 *LP Gas installations in caravans and boats for non-propulsive purposes*,  
 NZS 3604:1999 *Timber Framed Buildings*;  
 The following clauses, and any related compliance documents, which are available at <https://www.building.govt.nz/>:  
 New Zealand Building Code Clause E2 External moisture,  
 New Zealand Building Code Clause G11 Gas as an Energy Source;  
 and all subsequent amendments and replacements.

- 2 Range  
Two gas cooking appliances which may include but are not limited to – domestic and commercial ovens, ranges, grills, fryers, baking ovens, steam ovens;  
two space gas heating appliances;  
two central gas heating appliances;  
two gas water heating appliances which may include but are not limited to – continuous flow water heaters, storage water heaters, pool heaters, spa pool heaters, indirect heated water heaters, boilers.
- 3 Definitions  
*Electrically controlled gas appliances* – mains power supplied electrically controlled gas appliances generally below 250MJ per hour rated input.  
*Job specifications* – instructions (oral, written, graphic) and may include any of the following: manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements. Where job specifications are in conflict with applicable legislation, standards, and/or codes, such legislation, standards, and/or codes shall take precedence for the purpose of assessment.  
*Maintain* may refer to all or any of – repair, upgrade, alter, remove, replace.
- 4 Credit for this unit standard does not entitle the candidate to legally perform certain electrical aspects of this work unless registered or supervised by a registered person under the provisions of the Electricity Act 1992.
- 5 Candidates must hold a current limited certificate or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of the installation of electrically controlled gas appliances and equipment.

### Performance criteria

- 1.1 Describe appropriate gas appliances, flues, and ventilation in accordance with job specifications and AS/NZS 5601:2013, Part 1 and Part 2.
- 1.2 Explain how the locations of gas appliances, flues, and ventilation are established in accordance with job specifications and AS/NZS 5601:2013, Part 1 and Part 2.
- 1.3 Explain limitations on electrical work that relate to gasfitters who are not electrically licensed.
- 1.4 Describe how to install gas appliances, flues, and ventilation.
- 1.5 Describe how to install flashing to ensure weather tightness in accordance with Clause E2 of the New Zealand Building Code and any related compliance documents.

- 1.6 Explain appropriate and required soundness tests in accordance with AS/NZS 5601:2013, Part 1 and Part 2.
- 1.7 Describe how to purge gas supply system in accordance with AS/NZS 5601:2013, Part 1.
- 1.8 Explain how to connect gas appliances and associated fittings to gas supply connection points.

## Outcome 2

Demonstrate knowledge of commissioning electrically controlled gas appliances and equipment.

### Performance criteria

- 2.1 Describe how gas appliance commissioning is carried out.
- 2.2 Describe how flues are tested in accordance with AS/NZS 5601:2013, Part 1.  
Range smoke test, draft gauge.
- 2.3 Describe how ventilation requirements are determined and calculated in accordance with AS/NZS 5601:2013, Part 1.
- 2.4 Identify and explain the post installation documentation to be completed for electrically controlled gas appliances and equipment.  
Range includes – information for gas certificates, guarantees, checklists; may also include other company requirements such as checklists and photographs of completed work.
- 2.5 Explain the consumer instruction process to be followed on completion of installation and commissioning.

## Outcome 3

Demonstrate knowledge of regulatory requirements, and underpinning concepts and principles, as applied to the installation and commissioning of electrically controlled gas appliances and equipment.

### Performance criteria

- 3.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the installation and commissioning of electrically controlled gas appliances and equipment.
- 3.2 Explain underpinning concepts and principles in terms of their application to the installation and commissioning of electrically controlled gas appliances and equipment.  
Range combustion, ventilation, energy efficiency.

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| <b>Replacement information</b> | This unit standard and unit standard 30708 replaced unit standard 21893. |
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| <b>Planned review date</b> | 31 December 2022 |
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#### Status information and last date for assessment for superseded versions

| Process      | Version | Date             | Last Date for Assessment |
|--------------|---------|------------------|--------------------------|
| Registration | 1       | 23 November 2017 | N/A                      |

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| <b>Consent and Moderation Requirements (CMR) reference</b> | 0003 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

#### Comments on this unit standard

Please contact The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.