

<b>Title</b>	<b>Demonstrate knowledge of safety in a wind farm environment</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People who achieve this unit standard will be able to: demonstrate knowledge of hazards and risks associated with wind turbines; describe the safety responsibilities of workers in a wind farm environment; identify tasks required to achieve safety from the system before maintenance is carried out on plant and low voltage apparatus; and identify tasks required to achieve safety from the system during restoration of normal operational condition of plant and low voltage apparatus.
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<b>Classification</b>	Electricity Supply > Electricity Supply - Power System Maintenance
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; Electricity Act 1992; Electricity (Safety) Regulations 2010; and any subsequent amendments and replacements; Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry* (2015) available from [www.eea.co.nz](http://www.eea.co.nz).
- 3 Definitions
 

*Asset owner* refers to a participant who owns or operates assets used for generating or conveying electricity.

*Authorising Engineer* refers to a person who has sufficient technical knowledge and/or experience and/or sufficiently consults with technical experts that enable them to understand hazards and has been appointed to approve procedures to work on plant and low voltage apparatus.

*Industry requirements* include all asset owner requirements; manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.

*Operational Controller* refers to a person who is responsible for the operational control of wind farm plant and LV apparatus, enacting the process of transfer of control, and controlling and co-ordinating safety activities necessary to achieve safety from the system.

#### 4 Range

Hazards include – gearboxes, braking systems, couplings, yaw and pitch systems, cooling and lubrication systems, working at heights, use of lifts and hoists, mechanical tools, stored energy, chemicals, fire, hydraulics, electric shock, arc flash.

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of hazards and risks associated with wind turbines.

#### Performance criteria

- 1.1 Hazards associated with wind turbines are described in terms of their potential to cause harm to people or equipment.
- 1.2 Risk is described in terms of probability and consequence.  
Range includes – risk to plant, workers, public, environment.
- 1.3 Methods of limiting risks associated with hazards in wind turbines are explained.  
Range evidence of one method per hazard is required.
- 1.4 The importance of following a sequence of tasks to achieve safety from the system is described in terms of how it minimises risk.
- 1.5 Potential hazards from re-energising the system are described.
- 1.6 Safe conditions for restoration of normal operational conditions are explained.

#### Outcome 2

Describe the safety responsibilities of workers in a wind farm environment.

#### Performance criteria

- 2.1 The responsibilities of everyone involved with working on or testing wind farm plant and low voltage apparatus are described.
- 2.2 The responsibilities of technicians working on or testing wind farm plant and low voltage apparatus are described in terms of their scope of work.  
Range work party leader, work party member.
- 2.3 The responsibilities of other people involved with working on or testing wind farm plant and low voltage apparatus are described.  
Range Authorising Engineer, Operational Controller.

**Outcome 3**

Identify tasks required to achieve safety from the system before maintenance is carried out on plant and low voltage apparatus.

**Performance criteria**

3.1 Tasks to achieve safety from the system before plant maintenance are identified.

Range evidence of four key tasks is required.

3.2 Tasks to achieve safety from the system before maintenance of low voltage apparatus are identified.

Range evidence of four key tasks is required.

**Outcome 4**

Identify tasks required to achieve safety from the system during restoration of normal operational condition of plant and low voltage apparatus.

**Performance criteria**

4.1 Tasks to achieve safety from the system during restoration of normal operational condition of plant are identified.

Range evidence of four key tasks is required.

4.2 Tasks to achieve safety from the system during restoration of normal operational condition of low voltage apparatus are identified.

Range evidence of four key tasks is required.

<b>Planned review date</b>	31 December 2027
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	29 April 2021	31 December 2023
Rollover and Revision	2	26 May 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0120
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihanga.nz](mailto:qualifications@waihanga.nz) if you wish to suggest changes to the content of this unit standard.