



Australian Government

UEPOPS019 Control electrical energy production

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry – Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required to control the safe operation of energy production to meet demand on an electricity generating unit.

Generating units usually operate independently, with most power generation production facilities consisting of several independent generating units which can be brought online or taken offline as demand fluctuates.

Competency in this unit requires the ability to plan for power generating plant operation, operate generator and excitation system, control generation of electrical energy and the completion of work. Individuals will, in general, work as an operator, in a power generation facility.

Power generation plant operators are trained and authorised to isolate, prepare plant and issue permits to work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

There are no prerequisite units

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 Plan for plant operation | 1.1 Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored |
| | 1.2 Work and resource requirements are identified from relevant personnel and documentation in accordance with workplace procedures |
| | 1.3 Preoperational check on electrical energy production plant is carried out in accordance with workplace procedures |
| 2 Operate generator and excitation system | 2.1 Generator and excitation system is operated in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| | 2.2 Synchronising requirements are assessed, evaluated and achieved to ensure generator and excitation system stability in accordance with workplace procedures |
| | 2.3 Generator and excitation system is monitored and observed to detect deviations from normal operating conditions in accordance with workplace procedures |
| | 2.4 Corrective actions are taken to rectify generator and excitation system abnormalities in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 3 Control generation of electrical energy | 3.1 Generator output is adjusted to meet demand in accordance with workplace procedures |
| | 3.2 Reactive power generation and voltage regulation requirements are assessed and the generator and excitation system are controlled to achieve output in accordance with workplace procedures |
| | 3.3 Generator stabilities and operating limits are assessed and the generator and excitation system are controlled to maintain those limits in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| | 3.4 Generator cooling systems and limits are monitored and assessed and the generator and excitation system are controlled to maintain those limits in accordance with |

manufacturers' recommendations and specifications and workplace procedures

- 4 Complete documentation**
- 4.1** Power generating plant problems, movements and status are reported in accordance with workplace procedures
 - 4.2** Documentation is updated in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEP Electricity Supply Industry – Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS457 Control electrical energy production.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>