



Australian Government

UEPOPS039 Evaluate scheduling of generation plant

Release: 1

UEPOPS039 Evaluate scheduling of generation plant

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 undertake the evaluation of a power generation plant schedule to meet forecast demand.

Scheduling is the process of arranging and optimising the use of generating plant and personnel in a power generation facility. Scheduling can have a major impact on the productivity and costs of a power generation facility.

Competency in this unit requires the ability to analyse load profile, evaluate power generation unit availability and capability, evaluate power generation unit schedule and complete documentation. Individuals will, in general, work as an operator with responsibility for scheduling 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

UEPOPS132 Schedule generation

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Analyse load profile

- 1.1** Information on variables which have the potential to affect power generation demand and load are analysed in accordance with workplace procedures
- 1.2** 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
- 1.3** Power generation forecasts are produced in accordance with workplace procedures
- 1.4** Power generation forecasts are evaluated against real time trends, and adjustments are made in accordance with workplace procedures

2 Evaluate unit availability and capability

- 2.1** Power generation unit status is analysed to maintain the integrity of scheduling plans in accordance with workplace procedures,
- 2.2** Information on power generation unit status is processed and recorded to enable the identification of problems in accordance with workplace procedures
- 2.3** Relationships are maintained with remote and independent power generators in accordance with workplace procedures

3 Evaluate generation unit schedules

- 3.1** Base load generation schedules are analysed in line with contractual obligations in accordance with workplace procedures
- 3.2** Peak load generation schedules are analysed to meet power generation system demand to maintain adequate spinning reserve capability in accordance with workplace procedures
- 3.3** Schedule is evaluated to confirm power generation units are operating in accordance with fuel strategies framework and workplace procedures
- 3.4** Megawatts and megavar spinning reserve criteria are continuously evaluated in accordance with workplace procedures

- 3.5 Power generation system security criteria are analysed continuously in accordance with workplace procedures
 - 3.6 Quality of supply is analysed continuously in accordance with legislative requirements and workplace procedures
 - 3.7 Power generation plant maintenance commitments are analysed when setting priorities for committing power generation units in accordance with workplace procedures
 - 3.8 Schedule is produced with sufficient lead time to allow power generation plant movements to occur in accordance with workplace procedures
 - 3.9 Power generation plant problems are assessed for impact on unit commitment and scheduling requirements in accordance with workplace procedures
 - 3.10 Power generation plant testing is incorporated into priorities for committing power generation units in accordance with workplace procedures
- 4 Complete documentation**
- 4.1 Scheduling information is recorded in accordance with workplace procedures
 - 4.2 Key stakeholders are informed of scheduling evaluation outcomes 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 UEPOPS524 Evaluate scheduling of generation plant.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPOPS039 Evaluate scheduling of generation plant

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least two separate occasions and include:

- analysing and forecasting load profile
- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - emergency procedures and techniques
 - risk control measures
 - safe working practices and procedures.
- assessing power generation unit availability and capability
- communicating with stakeholders
- completing documentation using recording procedures
- evaluating power generation unit schedules
- evaluating scheduling of power generating units for efficiency using data analysis techniques and tools
- identifying power generation unit status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- preparing and implementing power generation schedules
- scheduling power generation plant to meet demand
- using manuals
- utilising fuel strategies.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- arrangements of power production plant
- evaluation techniques and tools
- framework for fuel strategies
- identification of power generation unit status

- load profile forecasts
- manuals
- operation and load characteristics of power generation plant
- power generation plant and equipment, location and operating parameters
- power generation schedule implementation
- power generation schedules, including peak load generation schedules
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- stakeholder liaison
- WHS/OHS requirements, including:
 - emergency procedures and techniques
 - risk control measures
 - safe working practices and procedures.
- workplace documentation
- workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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