



Australian Government

UEPOPS524 Evaluate scheduling of generation plant

Release: 1

UEPOPS524 Evaluate scheduling of generation plant

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

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 typically 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.

Note: Workplace practice

The application of the skills and knowledge described in this unit may require a licence or training permit to practice in the workplace where work is carried out on gas and electrical installations. Additional conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

UEPOPS422 Schedule generation

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Analyse load profile

2 Evaluate unit availability and capability

3 Evaluate generation unit schedules

PERFORMANCE CRITERIA

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

- 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** Power generation forecasts are produced, in accordance with workplace procedures
- 1.3** Power generation forecasts are evaluated against real time trends, and adjustments are made, in accordance with workplace procedures
- 2.1** Power generation unit status is analysed, in accordance with workplace procedures, to maintain the integrity of scheduling plans
- 2.2** Information on power generation unit status is processed and recorded, in accordance with workplace procedures, to enable the identification of problems
- 2.3** Relationships are maintained with remote or independent power generators, in accordance with workplace procedures
- 3.1** Base load generation schedules are analysed, in accordance with workplace procedures, and in line with contractual obligations
- 3.2** Peak load generation schedules are analysed to meet power generation system demand, in accordance with workplace procedures, to maintain adequate spinning reserve capability
- 3.3** Schedule is evaluated to confirm power generation units are operating, in accordance with workplace procedures and fuel strategies framework
- 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 workplace procedures and legislative requirements
 - 3.7** Power generation plant maintenance commitments are analysed, in accordance with workplace procedures, when setting priorities for committing power generation units
 - 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS524A Evaluate the scheduling of generation.

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 UEPOPS524 Evaluate scheduling of generation plant

Modification History

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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, performance criteria and range of conditions on at least two separate occasions and includes:

- 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 optimum efficiency using data analysis techniques and tools
- identifying power generation unit status
- implementing legislation, industry standards, codes of practice and regulations
- preparing and implementing power generation schedules
- scheduling power generation plant to meet demand
- using manufacturers' specifications and 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, performance criteria and range of conditions and includes knowledge of:

- evaluation techniques and tools
- framework for fuel strategies
- identification of power generation unit status
- legislation, industry standards, codes of practice and regulations

- load profile forecasts
- manufacturers' specifications and manuals
- operation and load characteristics of power generation plant
- power generation plant and equipment, its location and operating parameters
- power generation schedule implementation
- power generation schedules including peak load generation schedules
- stakeholder liaison
- typical arrangements of power production plant
- WHS/OHS legislated requirements including:
 - emergency procedures and techniques
 - risk control measures
 - safe working practices and procedures
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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 currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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