



**Australian Government**

# **UEPOPS132 Schedule generation**

**Release: 1**

# UEPOPS132 Schedule generation

## 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 scheduling of generation plant to meet forecast demand.

Scheduling is the process of optimising plant operations in the power generation process. The aim is to enhance overall energy delivery over different planning and time horizons.

Competency in this unit requires the ability to forecast from market data, identify generation unit availability and capability, prepare generation unit schedules and implement generation unit schedules. Individuals will, in general, work under supervision, in a power generation facility as an operator with responsibility for scheduling.

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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|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Forecast from market data</b>                 | <ul style="list-style-type: none"><li><b>1.1</b> Information on all variables which have the potential to affect generation demand is obtained and employed to enable a forecast in accordance with workplace procedures</li><li><b>1.2</b> 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</li><li><b>1.3</b> Forecast prediction is based on the interpretation of relevant information in accordance with workplace procedures</li><li><b>1.4</b> Forecast outcomes are produced in a timeframe that enables electricity system security and operational criteria to be maintained in accordance with workplace procedures</li><li><b>1.5</b> Forecast prediction is continuously assessed against real time trends and adjustments are made in accordance with workplace procedures</li></ul> |
| <b>2 Identify unit availability and capability</b> | <ul style="list-style-type: none"><li><b>2.1</b> Information integrity is confirmed and deficiencies detected and rectified in accordance with workplace procedures</li><li><b>2.2</b> Information is processed and recorded in a timeframe that enables scheduling to take place in accordance with workplace procedures</li><li><b>2.3</b> Information on all factors which have the potential to affect generation unit status is obtained in accordance with workplace procedures</li><li><b>2.4</b> Communication is maintained with remote and independent power generators in accordance with workplace procedures</li><li><b>2.5</b> Power generation plant maintenance commitments are incorporated into setting priorities for committing generation units scheduling in accordance with workplace procedures</li><li><b>2.6</b> Generation plant testing commitments are incorporated into setting scheduling priorities for committing units in accordance with workplace procedures</li></ul>                 |

- 2.7 Power station generation plant problems are accurately assessed for impact on generation unit commitments and scheduling requirements in accordance with workplace procedures
- 3 Prepare generation unit schedules**
- 3.1 Base load generation is scheduled in accordance with workplace procedures
- 3.2 Electricity system security criteria is applied and met in accordance with workplace procedures
- 3.3 Schedule is produced and applied to allow for power generation plant movements to occur within required timeframes in accordance with workplace procedures
- 4 Implement generation unit schedules**
- 4.1 Circumstances resulting in unexpected changes to demand are identified and managed in accordance with electricity system requirements and workplace procedures
- 4.2 Transmission system losses are identified and minimised in accordance with electricity system requirements and workplace procedures
- 4.3 Transmission and generation system status changes are identified and accommodated in accordance with electricity system requirements and workplace procedures
- 4.4 Fuel supply status changes are identified and accommodated in accordance with electricity system requirements and workplace procedures
- 4.5 Generation outputs are monitored in accordance with electricity system requirements and workplace procedures
- 4.6 Power generation plant problems are assessed and impact on generation unit scheduling and electricity system requirements in accordance with workplace procedures
- 4.7 Electricity system fault levels and transmission plant load levels are identified and not exceeded in accordance with electricity system requirements and workplace procedures
- 4.8 Scheduling of generation units is timed to optimise electricity system efficiency in accordance with

workplace procedures

- 4.9** Scheduling information is recorded and communicated to all stakeholders in accordance with electricity system requirements and 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 UEPOPS422 Schedule 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 UEPOPS132 Schedule generation

## 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.

## 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:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
  - emergency procedures
  - risk control measures
  - safety working practices
- communicating with personnel
- distinguishing power generation plant status
- forecasting load profiles
- identifying scheduling plant to meet demand
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- preparing and implementing generation schedules
- recognising generation unit status including availability and capability
- scheduling generating units to maintain electricity system efficiency
- using data analysis techniques and tools.

## 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, including operating parameters
- electricity system operating instructions
- generation schedules
- generation unit status
- operating criteria including fuel strategies
- operation and loading characteristics of generation plant
- power generation plant status
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and

- specifications, and environmental requirements
- schedule techniques
- scheduling plant and equipment, location and operating parameters
- WHS/OHS requirements, including:
  - emergency procedures
  - safety working practices and procedures
  - risk control measures
- 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.

## Links

Companion Volume implementation guides are found in VETNet -

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