



Australian Government

UEPOPS143 Tune process plant and equipment

Release: 1

UEPOPS143 Tune process plant and equipment

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 complete the investigation, nomination and adjustment of tuning parameters associated with power generation process plant and equipment

Tuning is a method in which one or more parameters of power generation plant and equipment are adjusted up or down to achieve an improved or specified result. Tuning will include testing and reviewing power generation process plant and equipment to identify faults.

Competency in this unit requires the ability to plan and prepare to tune generation process plant and equipment, test and implement process plant tuning, and complete documentation. Individuals will, in general, work under supervision 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

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Plan and prepare work

- 1.1** Tuning requirements for process plant and equipment are identified from relevant personnel and documentation 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** Resource and equipment requirements are identified in accordance with workplace procedures
- 1.4** Process plant availability, capability and limitations are identified in accordance with workplace procedures
- 1.5** Testing and monitoring equipment are connected in accordance with process plant, manufacturers' recommendations and specifications, and workplace procedures
- 1.6** Initial operating state for process plant is maintained for testing in accordance with legislative requirements and workplace procedures
- 1.7** Test procedures are identified and recording documentation and equipment is prepared in accordance with workplace procedures
- 1.8** Testing equipment is calibrated in accordance with manufacturers' recommendations and specifications, and workplace procedures

2 Test plant and implement tuning

- 2.1** Field instrumentation and control elements are checked for calibration and operation in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 2.2** Testing and tuning are performed in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 2.3** Variations are reassessed and accommodated to enable test objectives to be met in accordance with manufacturers' recommendations and specifications, and workplace procedures

- 2.4 Testing results are analysed and new settings for process plant are determined in accordance with workplace procedures
 - 2.5 Accuracy of test results is assessed through analysis of test data in accordance with workplace procedures
 - 2.6 Process plant is retuned to achieve outcomes in accordance with workplace procedures
- 3 **Complete documentation**
 - 3.1 Records are updated and documentation is retained in accordance with workplace procedures
 - 3.2 Changes to equipment operational settings are recommended to relevant personnel in accordance with workplace procedures
 - 3.3 Implementation of recommendations are monitored 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 UEPOPS511 Tune process plant and equipment.

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 UEPOPS143 Tune process plant and equipment

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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 test results
- applying work health and safety (WHS)/occupational health and safety (OHS) legislated requirements, including:
 - emergency procedures
 - risk control measures
 - safety procedures
- communicating with personnel
- completing documentation using recording procedures
- coordinating testing operations using monitoring procedures
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- locating process plant and equipment
- planning and preparing for tuning
- setting up and using testing or tuning equipment
- translating and using tuning parameters and settings
- using data analysis techniques and tools
- utilising testing and tuning techniques for process plant and equipment.

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:

- analysis methods and tools
- arrangements of power production plant
- manuals
- power generation process plant and equipment, location and operating parameters
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and

- specifications, and environmental requirements
- tuning and testing techniques and processes
- tuning parameters and settings
- WHS/OHS requirements, including:
 - safety procedures
 - emergency 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

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