



Australian Government

UEERA0056 Monitor and adjust refrigeration energy management systems

Release: 1

UEERA0056 Monitor and adjust refrigeration energy management systems

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to monitor and adjust refrigeration energy management systems.

It includes setting up and adjusting energy management systems on refrigeration systems for effective energy use. It also includes working safely, testing and analysing system parameters, adjusting equipment and controls, following workplace procedures, and documenting final operating parameters and settings.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, skills and knowledge described in this unit require a relevant contract of training, such as an Australian Apprenticeship.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to refrigeration, air conditioning or electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Permits may also be required for some work environments, such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work

UEERA0059 Prepare and connect refrigerant tubing and fittings

UEERA0036 Establish the basic operating conditions of vapour compression systems

UEERA0035 Establish the basic operating conditions of air conditioning systems

UEERA0050 Install refrigerant pipe work, flow controls and accessories

UEERA0094 Verify functionality and compliance of refrigeration and air conditioning installations

UEERA0081 Select refrigerant piping, accessories and associated controls

UEERA0031 Diagnose and rectify faults in air conditioning and refrigeration control systems

UEERA0092 Solve problems in low voltage refrigeration and air conditioning circuits

UEERL0005 Locate and rectify faults in low voltage (LV) electrical equipment using set procedures

UEERL0004 Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring

UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

UEERL0002 Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.

Competency Field

Refrigeration and air-conditioning

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to monitor and adjust energy management systems on refrigeration system

PERFORMANCE CRITERIA

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

- 1.1** WHS/OHS requirements and workplace procedures for a given work area are identified and applied
- 1.2** WHS/OHS risk control measures and workplace procedures are followed in preparation for refrigeration system work
- 1.3** Safety hazards not previously identified are noted on job safety assessment and established risk control measures

- implemented
- 1.4 Appropriate person/s is consulted to ensure refrigeration system work is coordinated effectively with others involved on the worksite
 - 1.5 Refrigeration system energy parameters are identified by reviewing system specifications and component technical data
 - 1.6 Tools, equipment and testing devices needed to carry out work are obtained and checked for correct operation and safety
 - 1.7 Preparatory work is checked to ensure no damage has occurred and complies with job requirements
 - 1.8 Need to test or measure live electrical work is determined in accordance with WHS/OHS requirements and workplace safety procedures
 - 1.9 Circuits are checked and isolated in accordance with WHS/OHS requirements and workplace procedures
- 2 Monitor and adjust energy management systems on refrigeration system**
- 2.1 WHS/OHS risk control measures and workplace procedures for carrying out refrigeration system work are followed
 - 2.2 Testing/measuring devices are connected and set up in accordance with job requirements and refrigeration system
 - 2.3 Monitoring and adjustments are made to equipment components and controls to provide effective energy use in accordance with refrigeration system specifications and regulatory requirements
 - 2.4 Unplanned situations are responded to in accordance with workplace procedures, discussions with appropriate person/s and job specifications and requirements in a manner that minimises risk to personnel and equipment
 - 2.5 Refrigeration system monitoring and adjusting is carried out efficiently without waste of materials or damage to apparatus, the surrounding environment or services using sustainable energy principles
- 3 Complete and report monitoring adjusting**
- 3.1 WHS/OHS risk control work completion measures and

activities

workplace procedures are followed

- 3.2 Worksite is cleaned and made safe in accordance with workplace procedures
- 3.3 Monitoring and adjustment settings are documented and appropriate person/s notified 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 UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Monitoring and adjusting refrigeration and energy management systems must include at least the following:

- two different types of energy management systems for refrigeration systems

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ121A Monitor and adjust refrigeration energy management systems.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>