Assessment Requirements for UETDRIS005 Implement & monitor power system environmental & sustainable energy management policies & procedures

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Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

Performance Evidence

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

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- gathering environmental management information
- implementing and monitoring environmental and sustainable energy policies and plans
- identifying environmental impacts and assess risks
- implementing and monitoring the procedures for quantifying environmental impacts and controlling risks
- implementing and monitoring procedures for dealing with environmental incidents
- maintaining environmental records, reports and plans
- dealing with unplanned events on at least one (1) occasion.

Knowledge Evidence

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

- environmental fundamentals, including:
  - environmental standards, codes, environmental legislation, supply authority regulations and/or enterprise requirements applicable to the control of environment associated with the worksite - relevant federal legislation, relevant state/territory legislation, relevant local government by-laws, relevant government or quasi government policies and regulations, and relevant community planning and development agreements (including land care agreements)
  - employer and employee responsibilities
  - methods of obtaining information on environmental issues and updates
  - methods of identifying environmental impacts from work-related activities
  - meaning of environmental terms - identification, assessment and control of risks,

compliance, best practice and sustainable energy

- procedures for implementing management plans to ensure compliance

- implementation and monitoring requirements for the impact of powerline installations and operation on the environment and/or the area surrounding the powerline and/or equipment, including:

  - identification of relevant legislation, codes and government guidelines for the implementation and monitoring of environmental impact factors in the workplace and areas of power distribution or transmission - Commonwealth/state/territory legislation relevant to the workplace and the Environment Protection Act legislation and common law

  - identification, assessment, control and monitoring of the hazards to the environment associated with the powerline industry

  - workplace environment quality standards enterprise plan - setting of acceptable emission level limits from power plant equipment; impact of the enterprise activities on air, water quality and nature; impact and level of emissions from power plant, power distribution and transmission equipment; and network infrastructure (noise generation, noxious gas emissions, greenhouse gas production, electromagnetic emissions, electromagnetic field strength, oil leakage and insulation breakdown products)

  - provision of manufacturer and supplier information, such as material safety data sheets (MSDS)

  - gathering of environment management information

  - maintenance of environmental records

  - risk assessment and its management in powerline industry

  - maintenance strategies for environment protection programs - developing processes for promoting, maintaining and improving environmental impact in the workplace; identifying techniques for evaluating and reviewing environment protection education and training programs; elements of an effective environment protection management system; and Environment Protection Authority (EPA) consultation and accident/incident investigations

- implementation and monitoring requirements for the management of sustainable energy in powerline installations and operation of plant and equipment, including:

  - identification of relevant legislation, codes and government guidelines for the implementation and monitoring of sustainable energy principles in the workplace, and power distribution and transmission networks - Commonwealth/state/territory legislation, legislation relevant to the workplace, Environment Protection Act legislation, local government by-laws, community planning and development agreements (i.e., land care agreements)

  - monitoring and reporting procedures for enterprise-specific policy implementation on sustainable energy issues, including the gathering of energy consumption and loss information

  - ongoing development of energy conservation policies - procedures for quantifying energy usage and wastage, energy usage auditing procedures, planning of energy conservation methods, and monitoring and review processes

  - resource availability planning for policy implementation

  - techniques in managing documentation - information on applicable sustainable energy

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    laws or other requirements; complaint records; training records; process information; process operational logbooks; inspection, maintenance and calibration records; relevant contractor and supplier information; incident reports; and information on emergency preparedness and response

- enterprise-specific policies and procedure instructions, including:
  - responsibilities and duty of care of employer and employee relationship
  - methods of obtaining the up-to-date information on enterprise policies and procedures
  - rules and regulations
  - induction into workplace - location of work area and storage area, timetable, uniform, personal wellbeing, housekeeping rules, emergency procedures and evacuation procedures
  - techniques when dealing with others - working in teams, customer relation, and complaint and issues procedures
  - overview of enterprise professional development - firefighting procedures, fatigue management, and training and competency development - understanding and promotion
- enterprise-specific WHS/OHS instructions, including:
  - standards, codes, legislation, supply authority regulations and specific enterprise regulations pertaining to WHS/OHS policies and procedures
  - methods of obtaining the up-to-date information on enterprise WHS/OHS policies and procedures
  - specific enterprise personal protection equipment (PPE) - type and application; where and when to be used; method of replacement; responsibility of maintenance, including cleaning, inspection and testing; and emergency response, rescue, evacuation and first aid procedures
  - personal wellbeing – hygiene, fatigue/stress management and drugs/alcohol
  - WHS/OHS training - induction training, specific hazard training, specific task or equipment training, emergency and evacuation training, and training as part of broader programs, such as equipment operation
  - WHS/OHS records - audits; inspection reports; workplace health and environmental monitoring records; training and instruction records; manufacturer and supplier information, such as MSDS; registers; maintenance reports; workers compensation and rehabilitation records; and first aid/medical records
- enterprise-specific technical drawing and documents, including:
  - types and application of enterprise-specific drawings and documents - electrical and electronic drawings, mechanical drawings, project charts, schedules, graphs, technical manuals and catalogues
  - instructions/worksheets - types and application of enterprise-specific symbols and diagrams
  - title box - description of parts and version control
- enterprise policies and procedures in maintaining the operation of plant, equipment and powerline installations using sustainable energy principles, including:
  - overview of sustainable energy technologies – solar, wind, biomass and CO_2 generation
  - economic benefits of sustainable energy initiatives

- relationship between greenhouse effect and sustainable energy
- types of renewable energy technology suitable for use in Australia - photovoltaic (PV), solar thermal, wind energy conversion, biomass, wind/tidal and gas thermal
- relationship between safe building design and energy efficiency - building aspect, insulation, ventilation, glazing, passive solar design and shading
- techniques in selecting control devices
- components within a lighting system
- energy efficient lighting products, design and installation
- use of natural light
- automated lighting control systems
- assessment of requirements and selection of system
- techniques in selecting control devices
- components within a heating, ventilation and air conditioning (HVAC) and refrigeration control system
- energy efficient refrigerants
- detection systems to control air flow
- energy star ratings for coefficient of performance
- energy control systems
- advantages of evaporative air conditioners in dry climates
- assessment of requirements and selection of system.

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 conditions involving realistic and authentic activities that replicate operational 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 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=229bace1-b7bc-4653-9300-dffb13ecfad7