



Australian Government

Assessment Requirements for FBPTEC5002 Manage utilities and energy for a production process

Release: 1

Assessment Requirements for FBPTEC5002 Manage utilities and energy for a production process

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has managed utilities and energy for at least one production process, including:

- determining utility and energy requirements and assessing current practices
- establishing supply options and conducting analysis to determine most efficient arrangements
- monitoring and evaluating utility and energy usage against targets
- identifying wastage or losses
- identifying, assessing and communicating opportunities for improving energy efficiencies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- uses of energy and utilities in production, and units of measurement used to quantify energy and utilities
- procedures for mapping the uses of energy and utilities in production, including:
 - analysing historical data
 - sale or production forecasts to project energy and utility requirements
 - identifying patterns of usage, including volume and spread of load
- methods used to measure usage rates, including:
 - physical measurement instruments
 - measurement techniques used to track inputs to and outputs
 - units of measurement used to quantify energy and utilities
- suppliers of energy and criteria used to select them, including:
 - costs and capacity

- contingency procedures in the event of failure of supplies
- elements of costs associated with supply, including tariffs, charges and peak demand and cost periods
- ability to spread load and risk by distribution to other suppliers and co-generation
- factors that affect the efficient use of energy and utilities
- consultative mechanisms to support continuous improvements
- techniques for assessing energy and utility usage rates of a given production facility to identify variances against budget or plans
- methods, equipment and operation for generating utilities for use on-site:
 - steam generation
 - other utilities appropriate to a given production facility
 - licensing and regulation requirements for boiler types
 - maintenance procedures and practices to minimise losses of steam, glycol or ammonia
 - procedures for shutting down plant and equipment
- configuration and design of the process and system to conserve and recycle energy and utilities, including:
 - steam
 - heat
 - water
- scheduling for efficient production, including:
 - existing energy and utility supply arrangements
 - dual objectives of production outcomes and efficient use of energy or utility
- energy conservation techniques, including:
 - lighting
 - air-conditioning
 - equipment standby
- procedures to develop proposals for utility improvement based on:
 - investigations
 - input from relevant technical specialists
- requirements for assessing and developing procedures to support efficient energy and utility utilisation in consideration of:
 - impacts on equipment
 - food safety
 - work health and safety
- communication strategies for changes to workplace systems and procedures to support improvements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - monitoring equipment
- specifications:
 - energy and resource utilisation information, including recording systems, system requirements and procedures
 - details of contractual arrangements with suppliers
 - production scheduling requirements and systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>