

Develop an understanding of and implement energy management strategies within an organisational structure.



LEVEL: 6
CREDITS: 5
FIELD: Physical Planning and Construction
SUBFIELD: Industrial Energy Managers
ISSUE DATE:
REVIEW DATE:
PURPOSE OF THE UNIT STANDARD:

This unit standard is for persons in the Engineering, Construction and Energy Sectors.

A person credited with this unit standard will be able to:

- Define energy management.
- Provide a rationale for industrial energy management in terms of South African and global market conditions.
- Describe energy supply pressures and government actions in South Africa that are driving industries towards effective energy management.
- Explain effective energy management as a multi-dimensional activity.
- Describe the organisational culture that prevails in your company.
- Contribute to change in the organisation towards effective energy management.
- Approach the implementation of energy management practices strategically.
- Assess the organisation in regard to six critical management functions.
- Use the organisational assessment to build consensus around energy the critical issues, and to plan actions that will increase organisational capacity.

This unit standard will contribute to the full development of the learner within the engineering, construction and energy environment by providing recognition, further mobility and transportability within the field of Physical Planning and Construction. The skills, knowledge and understanding demonstrated within this unit standard are essential for social and economic transformation and upliftment within the engineering, construction and energy environment.

LEARNING ASSUMED TO BE IN PLACE:

The following knowledge, skills attitude and / or equivalent:

- A minimum of a National Diploma (Engineering) at NQF Level 5 or equivalent.
- An understanding of electrical engineering principles at in the context of industrial systems.
- An understanding of mechanical engineering principles in the context industrial systems.
- A working knowledge of operations maintenance in industry.
- A working knowledge of relevant sections of SANS.
- A working knowledge of relevant sections of the OSH Act.
- A working knowledge of management principles.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

SPECIFIC OUTCOME 1:

Understand and apply energy management in the South African context.

ASSESSMENT CRITERIA:

- 1.1 Energy management defined and motivated in the context of the key principles and inter-related pressures.
- 1.2 Energy management is understood and applied in terms national policy and supply issues.
- 1.3 Energy management is understood and managed in terms of costs.
- 1.4 Energy management is understood and applied in terms of its technical, organizational and human behavioural dimensions.

SPECIFIC OUTCOME 2:

Develop a strategic approach to energy management.

ASSESSMENT CRITERIA:

- 1.1 Organisational change is understood and implemented towards energy management strategies.
- 1.2 Characteristics of energy management is understood and applied the in terms of the organisational structure.
- 1.3 A strategic approach to energy management planned in terms of the implementation process.
- 1.4 Action planning tables are developed in terms accountability.

Range: The accountability aims are: To gain control, investing and to maintain control.

SPECIFIC OUTCOME 3:

Assess the organisational capacity for energy management.

ASSESSMENT CRITERIA:

- 1.1 Energy management assessment aids are understood and explained in terms of their use to assess the organisation.

Range: Assessment aids can include but is not limited to: Energy management profile matrix, energy saving- and energy management ratings tables and graphs.

- 1.2 Energy management assessment aids are used effectively in to assess the organisation.
- 1.3 Energy management assessment aids are interpreted in terms of the organisations profile.
- 1.4 Insights gained are translated into an action plan towards energy management.

SPECIFIC OUTCOME 4:

Develop an action plan towards energy management.

ASSESSMENT CRITERIA:

- 2.1 Tasks which have to be carried out are Identified, to meet energy management objectives.
- 2.2 The responsible persons are identified in terms of the tasks which have to be carried out to meet energy management objectives.
- 2.3 A program is developed in terms of energy management objectives which has to be met.
- 2.4 A business case is developed for energy management in terms of the resources required to meet objectives.

ACCREDITATION AND MODERATION OPTIONS:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard must be accredited as a provider through the relevant ETQA.
3. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures

NOTES:

1. CRITICAL OUTCOMES

The following critical outcomes are addressed in this unit standard:

1. Identify and solve problems (Identify potential barriers and practical problems and solve them to ensure that energy management objectives are met.)
2. Organise and manage oneself (Understand and manage energy management.)
3. Communicate (Motivate staff to support energy management.)
4. Use science and technology (Use mass communication systems to inform and motivate staff.)
5. Understand the world as a set of related systems (Understand the global impact of the efficient use of energy in terms emission mitigation.)

2. ESSENTIAL EMBEDDED KNOWLEDGE

Knowledge that will help me understand and that I will be able to explain:

- An understanding of energy management principles.
- An understanding of the factors which influences energy use.
- An understanding of overhead costs.
- An understanding of corporate the structure and culture.
- An understanding of energy management strategies.
- An understanding of organisational assessment tools.

3. SUPPLEMENTARY INFORMATION:

SPECIFIED REQUIREMENTS include legal and legislative specific requirements and are contained in one or more of the following documents

- OSH Act
- Relevant SANS standards and codes
- South African Building Code
- Specifications, agreements, policies and procedures of the relevant organisation
- User manuals supplied by manufacturers
- Relevant ISO Standards

SUPPLEMENTARY READING

- www.actionenergy.org.uk

A ***glossary of terms*** about the terminology of
CONTEXT SPECIFIC

CREDITS

Total hours required by the learner to achieve the required outcomes:

	Activity	Hours
Classroom learning		5
On-the-job learning		30
Self directed learning		10
Coaching required		5
Other		
	TOTAL	50

CREDITS ACHIEVED: 5