

Domain**SOLAR INSTALLATION****Title:****Demonstrate advanced computer applications skills****Level: 3****Credits: 4****Purpose**

This unit standard specifies the competencies required to demonstrate advanced computer applications skills. It includes Using computer simulation programme, solar calculator to size systems of photovoltaic pumping systems, preparing the presentation of PowerPoint. This unit standard is intended for those who work as solar installations technicians.

Special Notes

1. Entry information:

Prerequisite

- *1641: Apply safety rules and regulations and demonstrated equivalent knowledge in a computer lab environment.*

2. To demonstrate competence, at a minimum, evidence in basic computer skills in both hardware and software.
3. Computer systems may include but not limited to hardware devices, components, software and technicians.
4. Assessment evidence may be collected from a real workplace or an appropriate simulated realistic environment in which system operations are carried out.
5. Performance of all elements in this unit standard must comply with all relevant workplace requirements and manufacturers' specifications.
6. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act No. 11 of 2007.
 - Petroleum Products and Energy Amendment Act No. 2 of 2005.
 - National Energy Fund Act of 2000.
 - Gas Act (Draft 2b).
 - Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.
 - ISO 14001 (Environmental Management Standard) and all subsequent amendments to any of the above.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment

arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Use computer simulation programme

Performance Criteria

- 1.1 Computer simulation described and the importance of computer simulation programme in engineering described.
- 1.2 Characteristics of computer simulation discussed and different types of computer simulation programmes are identified and explained.
- 1.3 Procedural concept for preparing practical systems and data for use in simulation programmes explained.
- 1.4 Carrying out a computer simulation programme(s) to solve any technical problem demonstrated.

Element 2: Use solar calculator to size systems

Performance Criteria

- 2.1 Definition of solar calculator and importance of solar calculator explained and demonstrated.
- 2.2 Identification, interpretation and preparation of information and data to be used in sizing solar systems demonstrated.
- 2.3 Using the solar calculator together with primary system information/data in sizing solar systems demonstrated and fully explained.
- 2.4 Obtaining results, interpretation of results and use of results from the solar calculator in sizing and make meaningful conclusions are demonstrated.

Element 3: Prepare PowerPoint presentations

Performance criteria

- 3.1 Technical presentation is explained and importance of preparing a technical presentation explained.
- 3.2 Power point computer programme as used in presentation is explained and demonstrated.
- 3.3 Presentation format and technics using power point are demonstrated.
- 3.4 Presentation skills using power point and confidence are demonstrated.

Registration Data

Subfield:	Electrical Engineering
Date first registered:	28 March 2018
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Anticipated review:	2023
Body responsible for review:	Namibia Training Authority