

OCCUPATIONAL SKILLS PROGRAMME DOCUMENT

IN LINE WITH QQSF POLICY (2021) OCCUPATIONAL QUALIFICATION TYPE (NOMENCLATURE)

SKILLS PROGRAMME	SKILLS PROGRAMME ID	TITLE (DESCRIPTOR)	NQF LEVEL	CREDITS
	SP-260302	Renewable Energy Workshop Assistant	4	58
START DATE	END DATE	LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT
04 March 2026	04 March 2031	04 March 2032		04 March 2035
CURRICULUM CODE	900524-000-01-00			
PARTNER DETAILS	ORGANISATION NAME	WEBSITE ADDRESS	TELEPHONE NUMBER	LOGO
QUALITY PARTNER - DEVELOPMENT	The Energy & Water Sector Education Training Authority (EWSETA)	https://ewseta.org.za/	011 274-4700	

Contents

1. SKILLS PROGRAMME DETAILS	4
1.1 Sub-Framework:	4
1.2 Type (Nomenclature):	4
1.2.1 Specify if this is a Qualification/Part-Qualification/Skills Programme	4
1.2.2 Type: (Nomenclature) e.g. Advanced Occupational Certificate)	4
1.3 Title Descriptor:	4
1.4 NQF Level:	4
1.5 Credits:	4
1.6 QCTO Curriculum Code:	4
1.7 Originator/Quality Partner (QP) – Development	4
1.7.1 Quality Partner (Qualifications Development):	4
1.8 Replacement	4
2. RATIONALE.....	5
2.1 The need for the Skills Programme:.....	5
2.2 Similar Qualification/ Part qualification/Skills Programmes:	5
2.3 Benefit to the sector, society and the economy:.....	5
2.4 Typical learners:	6
2.5 Relation to Occupation(s) and/or Profession(s).....	6
2.5.1 Occupation(s) related:	6
2.5.2 Profession(s) related:	6
3. PURPOSE	6
3.1 Benefit the learners:	6
3.2 What the skills programme intends to achieve:	7
3.3 Typical Graduate Attributes	7
4. ENTRY REQUIREMENTS	7
5. RECOGNITION OF PRIOR LEARNING (RPL)	7
5.1 RPL for Access to Training/Exemption:	7
5.2 RPL for Access to the Final Integrated Supervised Assessment (FISA):	8
6. RULES OF COMBINATION	8
6.1 Components:	8
6.2 Soft Skills Included:	9
6.3. Foundational Learning:	9
7. EXIT LEVEL OUTCOMES (ELO) AND ASSOCIATED ASSESSMENT CRITERIA (AAC). 9	
7.1 Exit Level Outcomes (ELO) 1:	9

Associated Assessment Criteria (AAC) for ELO 1:	9
7.2 Exit Level Outcomes (ELO) 2:	10
Associated Assessment Criteria (AAC) for ELO 2:	10
7.3 Exit Level Outcomes (ELO) 3:	10
Associated Assessment Criteria (AAC) for ELO 3:	10
8. INTEGRATED ASSESSMENT	10
8.1 Formative Assessments conducted internally.	10
8.2 Integrated Summative Assessments Conducted Internally	10
8.3 De-centralised Final Integrated Supervised Assessment (FISA) for Skills Programmes	11
9. ARTICULATION.....	13
9.1 Articulation for Skills programmes	13
9.1.1 Work Opportunities:	13
9.1.2 Learning Opportunities:	13
10. NOTES	14
10.1 Additional Legal or Physical Entry Requirements.....	14
None	14
10.2 Criteria for Accreditation	14
10.3 Encompassed Trades (where applicable)	14
11. ASSOCIATED QUALIFICATION(S)/PART-QUALIFICATION(S):.....	14

1. SKILLS PROGRAMME DETAILS

1.1 Sub-Framework:

Occupational Qualifications Sub-Framework

1.2 Type (Nomenclature):

1.2.1 Specify if this is a Qualification/Part-Qualification/Skills Programme

Skills Programme

1.2.2 Type: (Nomenclature) e.g. Advanced Occupational Certificate)

Skills Programme

1.3 Title Descriptor:

Renewable Energy Workshop Assistant

1.4 NQF Level:

4

1.5 Credits:

58

1.6 QCTO Curriculum Code:

900524-000-01-00

1.7 Originator/Quality Partner (QP) – Development

1.7.1 Quality Partner (Qualifications Development):

Energy and Water Sector Education Training Authority

1.8 Replacement

This skills programme replaces:

SAQA QUAL/US/LP ID OR QCTO/SETA APPROVAL ID	QUALIFICATION TITLE	Pre- 2009 NQF Level	CURRICULUM CODE (if Occupational)	NQF LEVEL	MIN. CREDITS
SP-210602	Renewable Energy Workshop Assistant	N/A	900524-000-00-00	4	24

2. RATIONALE

2.1 The need for the Skills Programme:

The Renewable Energy Workshop Assistant Skills Programme is required to respond to the rapid expansion of the renewable energy sector in South Africa and the growing demand for technically supported installation and maintenance services.

Currently, the sector experiences a critical shortage of suitably trained and qualified workshop and installation support personnel. As a result, companies often recruit unqualified individuals and rely on informal, on-the-job training, which leads to inconsistent performance, safety risks, resource wastage, and reduced system efficiency.

This Skills Programme addresses this gap by providing structured, standardised, and industry-aligned training that equips learners with the foundational technical and practical skills required to support technicians in the assembly, installation, and maintenance of renewable energy plants and systems.

The previous version of the programme is no longer adequate in meeting current industry requirements, technological advancements, and operational demands. This reviewed and updated programme provides a focused and occupationally relevant intervention that will strengthen workforce readiness, improve productivity, support safe work practices, and increase the availability of competent renewable energy support personnel.

By developing a pool of trained Renewable Energy Workshop Assistants, the programme contributes to:

- Strengthening capacity in the renewable energy value chain
- Supporting the country's transition to a green economy
- Improving employability of unemployed youth and semi-skilled workers
- Reducing operational risks and inefficiencies in renewable energy installations

This directly supports national priorities linked to energy security, job creation, and climate change mitigation strategies.

2.2 Similar Qualification/ Part qualification/Skills Programmes:

- Occupational Certificate: Solar Photovoltaic Service Technician, NQF level 5, Credits 344 (SAQA ID: 99447)
- Occupational Certificate: Hot Water System Installer (Solar Water Installer), NQF Level 4, Credits 67 (SAQA ID: 94619)
- Occupational Certificate: Wind Turbine Service Technician, NQF level 5, Credits 123 (SAQA ID: 99559)

2.3 Benefit to the sector, society and the economy:

Benefit to the Sector

The Renewable Energy Workshop Assistant Skills Programme contributes directly to strengthening technical capacity within the renewable energy sector. It addresses the current shortage of skilled support personnel required for the assembly, installation, and maintenance of renewable energy systems. By improving the quality and availability of semi-skilled technical assistants, the programme contributes towards enhancing operational efficiency, improving adherence to safety standards, and reducing installation and maintenance errors, ultimately supporting the reliable performance of renewable energy plants.

Benefit to Society

This programme contributes to social development by creating access to employment opportunities for unemployed youth and entry-level workers. It supports skills development in growing green economy sectors, thereby promoting social inclusion, reducing poverty, and addressing unemployment. The programme also contributes to reducing social ills linked to unemployment, such as crime and substance abuse, by providing structured learning and career pathways within the renewable energy industry.

Benefit to the Economy

By increasing the availability of trained renewable energy support personnel, the programme supports national energy security and economic competitiveness. Efficient and well-maintained renewable energy installations contribute to lowering operational costs and improving energy reliability. Furthermore, the programme aligns with South Africa's broader commitment to climate change mitigation and sustainable development, supporting green economic growth and attracting investment into renewable energy infrastructure.

2.4 Typical learners:

Typical Learners are people drawn from the ranks of unemployed and employees that demonstrate necessary capability towards the Skills Programme requirements.

2.5 Relation to Occupation(s) and/or Profession(s)

2.5.1 Occupation(s) related:

2.5.1.1 Collaboration with relevant stakeholders:

Stakeholders which participated include:

- Skills Development Providers (Public and Private)
- Employer Associations
- Curriculum/Assessment Experts
- Higher Education Institutions

2.5.1.2 List typical occupations in which the qualifying learner will operate (if relevant)

- Solar Photovoltaic Service Technician
- Hot Water System Installer (Solar Water Installer)
- Wind Turbine Service Technician

2.5.2 Profession(s) related:

2.5.2.1 Collaboration with relevant stakeholders:

N/A

2.5.2.2 List typical professions in which the qualifying learner will operate (if relevant)

N/A

3. PURPOSE

3.1 Benefit the learners:

Through this skills programme, learners gain:

- Practical hands-on competencies in the use of tools, equipment, and renewable energy system components.
- Exposure to real workshop and installation environments aligned to industry practices.

- An improved understanding of safety procedures, hazard identification, and workplace requirements in renewable energy operations.
- Entry-level technical skills required to support technicians in installation, assembly, maintenance and basic testing of renewable energy systems.

The programme also provides learners with clear occupational progression pathways into related occupations such as Solar PV Service Technician, Wind Turbine Service Technician, and Hot Water System Installer.

For unemployed youth and entry-level workers, this programme improves access to sustainable employment opportunities, supports career mobility, and creates a foundation for further studies in renewable energy and related technical fields.

By completing this programme, learners become more competitive in the labour market and better equipped to contribute meaningfully to South Africa's green economy and sustainable energy initiatives.

3.2 What the skills programme intends to achieve:

The purpose of this skills programme is to prepare a learner to operate as a Renewable Energy Workshop Assistant.

A Renewable Energy Workshop Assistant plans, prepares, and assists under supervision of technicians with installation, maintenance, energy production process, quality assurance and component assembly for Renewable Energy processes, systems, facilities, and equipment.

A qualified learner will be able to:

- Use hand tools, power tools, and measuring instruments specific to renewable energy systems.
- Assemble and install renewable energy systems and components
- Perform repairs, routine maintenance and care for tools and equipment

3.3 Typical Graduate Attributes

Attention to detail, industrious, technical acumen, professional, ethical and teamwork.

4. ENTRY REQUIREMENTS

NQF Level 3 qualification with Mathematics

5. RECOGNITION OF PRIOR LEARNING (RPL)

5.1 RPL for Access to Training/Exemption:

Learners may use the RPL process to gain access to training opportunities for a skills programme if they do not meet the formal, minimum entry requirements for admission. RPL assessment provides an alternative access route into a skills programme.

Such an RPL assessment may be developed, moderated, and conducted by the accredited Skills Development Provider which offers that specific skills programme. Such an assessment must ensure that the learner is able to display the equivalent level of competencies required for access, based on the NQF level descriptors.

For exemption from modules through RPL, learners who have gained the stipulated competencies of the modules of a skills programme through any means of formal, informal, or non-formal learning and/or work experience, may be awarded credits towards relevant modules, and gaps identified for training, which is then concluded.

5.2 RPL for Access to the Final Integrated Supervised Assessment (FISA):

Learners who have gained the stipulated competencies of the modules of a skills programme through any means of formal, informal, or non-formal learning and/or work experience, may be awarded credits towards relevant modules, and gaps identified for training, which is then concluded.

For a Skills Programme, the accredited Skills Development Provider (SDP) must ensure all modular competency requirements are met prior to the FISA and keep record of such evidence.

Upon successful completion of the FISA, RPL learners will be issued with the QCTO certificate for the skills programme. Quality Partners are responsible for ensuring the RPL mechanism and process for skills programme is approved by the QCTO.

6. RULES OF COMBINATION

6.1 Components:

KNOWLEDGE/THEORY COMPONENT

MODULE CODE	MODULE TITLE	NQF LEVEL	CREDITS	MODE OF DELIVERY
900524-000-01-KM-01	Introduction to Renewable Energy	4	4	Blended or face-to-face or online
900524-000-01-KM-02	Equipment and Tools	4	7	Blended or face-to-face or online
900524-000-01-KM-03	Principles of working at Heights	3	3	Blended or face-to-face or online
900524-000-01-KM-04	Basic Mechanical Concepts of Renewable Energy	4	6	Blended or face-to-face or online
900524-000-01-KM-05	Basics of Electricity	3	4	Blended or face-to-face or online
900524-000-01-KM-06	Workplace fundamentals	4	5	Blended or face-to-face or online

Total Credits = 29

APPLICATION COMPONENT

PRACTICAL SKILLS MODULE(S)

MODULE CODE	MODULE TITLE	NQF LEVEL	CREDITS	MODE OF DELIVERY
900524-000-01-PM-01	Use tools, measuring instruments, and equipment	3	7	Face-to-face
900524-000-01-PM-02	Plan and assist in the installation of the renewable energy plant	4	8	Face-to-face
900524-000-01-PM-03	Mitigate and respond to hazards associated with Renewable Energy system installation	3	8	Face-to-face
900524-000-01-PM-04	Conduct routine maintenance of equipment and store equipment and material	4	6	Face-to-face

Total credits = 29

6.2 Soft Skills Included:

8.6% of soft skills is included in the following Module:

900524-000-01-KM-06, Workplace fundamentals.

6.3. Foundational Learning:

- KM-05-KT06, Electrical measuring instruments
- KM-06, Workplace Fundamentals

7. EXIT LEVEL OUTCOMES (ELO) AND ASSOCIATED ASSESSMENT CRITERIA (AAC)

7.1 Exit Level Outcomes (ELO) 1:

Use hand tools, power tools, and measuring instruments for component assembly and installation.

Associated Assessment Criteria (AAC) for ELO 1:

- Various hand tools are identified, selected, used and maintained safely and effectively during maintenance and installation
- Various (manual lifting) equipment are identified, selected, used and maintain tools safely and effectively during maintenance and installation
- Various power tools are identified, selected, used and maintained safely and effectively and effectively during maintenance and installation
- Various measuring instruments are identified, selected, used and maintain tools safely and effectively during maintenance and installation
- Unsafe and/ or damaged tools are identified and reported

7.2 Exit Level Outcomes (ELO) 2:

Plan and install renewable energy components for plant operations.

Associated Assessment Criteria (AAC) for ELO 2:

- Site planning preparation is conducted to legal and industry standards
- Forms of renewable energy are identified and discussed in terms of their functionality, application, and energy output potential.
- Components of various renewable energy mechanical components are identified and used to standard requirements
- Electricity components (Power Generation Components, Power Conditioning Components, Energy Storage Components, Protection and Control Components, Distribution Components, Monitoring and Measurement Components, Cabling and Connection Components, Grounding and Earthing Components) are identified and their uses explained within the renewable energy working environment
- Mechanical components for various renewable energy systems are identified, and their functions are described within the specific renewable energy system
- Processes for preparation of the site are conducted and explained in terms of their importance to the processes of plant installation, health and safety and legal compliance.
- Soldering processes are conducted and explained in terms of techniques, tools and methods.
- Riveting processes are conducted and explained in terms of techniques, tools and methods.

7.3 Exit Level Outcomes (ELO) 3:

Perform routine maintenance and care for tools and equipment for operational readiness.

Associated Assessment Criteria (AAC) for ELO 3:

- Caring and routine maintenance of power tools, engineering power tools and equipment is conducted to manufacturer and operational requirements
- Equipment is stored to industry standard.
- Materials are packed and stored in accordance with industry standards

8. INTEGRATED ASSESSMENT

8.1 Formative Assessments conducted internally.

Formative assessments are conducted throughout the training of learners. A range of formal, non-formal, and informal ongoing assessment activities are used to focus on teaching and learning outcomes to improve learner attainment.

Formative assessments are conducted continuously by the facilitator to feed into further learning, to identify strengths and weaknesses, and to ensure the learner's ability to apply knowledge, skills and workplace experience gained.

Formative Assessments are conducted by the accredited Skills Development Provider (SDP), and a variety of ongoing assessment methods may be used, for example, quizzes, assignments, tests, scenarios, role play, and interviews. Continuous feedback must be provided.

8.2 Integrated Summative Assessments Conducted Internally

Integrated Assessment involves all the different types of assessment tasks required for a particular occupational skills programme, such as written assessment of theory and practical demonstration of competence. To achieve this, the Internal Assessment Criteria (IAC) for all modules as found in the QCTO curriculum document must be followed.

An accredited SDP should implement a well-designed, formal, relevant, final internal Summative Assessment strategy for all modules to prepare learners for the FISA. These assessments evaluate learning achievements relating to the achievement of each module of the relevant components of the skills programme.

Internal Summative Assessments are developed, moderated, and conducted by the SDP at the end of each module or after integration of relevant modules, e.g. applied knowledge tests, workplace tasks, practical demonstrations, simulated tasks/demonstrations, projects, case studies, etc.

8.3 De-centralised Final Integrated Supervised Assessment (FISA) for Skills Programmes

The FISA is de-centralised, and the assessment standards set by the QCTO must be implemented by the accredited SDP in the development, moderation, and implementation of all FISA for Skills Programmes.

The accredited SDP manages and conducts the FISA and submits learner results for QCTO approval for certification, according to QCTO required compliance standards.

For entrance into the FISA, the learner must have completed the Skills Programme successfully and be found competent in all modules, recorded internally by the SDP.

Continuous Assessment

The SDP must ensure that all learners are enrolled with the QCTO at the start of training (within 5 days) in the format required by the QCTO.

Continuous assessments are set by the SDP by the outcomes provided.

This may consist of a variety of methods, e.g. practical or written assessments, assignments, projects, demonstrations, presentations or any other form of assessment to assist the learner in the learning process.

During training, it is mandatory for formal summative assessments to take place at the end of each module/topic. These results must be formally recorded and be available for monitoring and/or evaluation by the QCTO.

Final Integrated Supervised Assessment (FISA)

All learners gain entrance to the Final Integrated Supervised Assessment by successfully completing all formal summative assessments conducted by the SDP.

Format of FISA: A practical assessment integrating the relevant Exit Level outcomes, with simultaneous verbal assessment of embedded knowledge by the assessor before, during or after the FISA.

All FISAs must be supervised, and virtual FISAs must be recorded throughout the assessment.

All Exit Level Outcomes must be covered in the FISA. In the FISA, the learner must demonstrate applied knowledge and skills to prove that the competencies of the Skills Programme have been achieved.

The FISA may not contain any assessments used in the "Continuous Assessment" process (thus no re-assessment).

Special considerations should be made for candidates with special learning needs.

Standards for Final Integrated Supervised Assessment (FISA):

The learner should be provided with a brief/job card/task to demonstrate what the learner should show, know, or produce in a product, relevant to the Exit Level Outcomes and the purpose of the Skills Programme. This is the section where the learner must show applied competency (what the learner must be able to do, and to what expected standard).

The FISA INSTRUMENT (brief/job card/task) must be developed and moderated by the SDP and conducted in a supervised environment. It is assessed by means of an **INSTRUMENT** and a **RUBRIC** developed by the SDP for this purpose:

A candidate must be able to work competently as a **Renewable Energy Workshop Assistant** in a simulated renewable energy workshop environment, demonstrate technical skills, safety compliance, and assist in assembling and testing a basic solar-powered energy system, in terms of each of the Exit Level Outcomes by:

1. Workshop Readiness and Safety Compliance

- Prepare the workshop station with all necessary tools, components, and PPE.
- Identify and eliminate potential hazards according to basic safety protocols.
- Safely handle and store solar and electrical components by using appropriate PPE and applying correct handling techniques,

2. Component System Assembly and Installation

- Install components of a renewable energy system
- Interpret basic assembly instructions and select the appropriate components for the task.
- Correctly assemble a basic solar panel kit or renewable energy demonstration system.
- Connect cables by correctly matching positive and negative terminals, using appropriate tools and securing connections firmly.

3. Basic Testing and Quality Checks

- Conduct voltage and current tests using a multimeter or appropriate test device.
- Record observations accurately and identify potential faults or abnormalities.
- Measure system output against the expected parameters within an allowable margin using appropriate measuring tools

4. Communication and Reporting

- Accurately complete a task sheet/job card outlining materials used, procedures followed, and system performance.
- Communicate verbally with the assessor to explain the steps taken and safety measures applied.
- Suggest one or more improvements to ensure enhanced workshop efficiency or learner safety.

Please take note of the following:

- Candidates must be provided with clear guidelines and instructions on how to complete the assessment tasks/job, including the assessment criteria and expected outcomes.
- The duration of the assessment is 3 hours.
- No FISA instrument is allowed to be used verbatim for re-assessment or for a different cohort of learners.

NOTE: Should a learner be found to be competent in all of the above areas, they should be declared “Competent.” If not yet competent in any of the above areas, they should be declared “NYC,” re-trained and then be reassessed with different applicable tasks/scenarios.

Whilst conducting the above, strategic, well-timed questions should be asked of the learner to assess embedded knowledge gained during the skills Programme, as well as critical thinking and problem-solving skills: for example:

- ""Why.....?"
- "What would happen if ...?"
- "When is done, what would the result be?"
- "How would you deal with?"
- Etc.

The marking rubric/compliance checklist used to assess these competencies must include a section for the assessor used in this session to make a note of competencies shown, (or not shown), as well as the questions that were asked, and a summary of the learner's answers, and state whether these are of the acceptable standard or not.

The marking rubric/compliance checklist compiled should contain specific areas marked with an asterisk (*) as compulsory sections in order for the learner to be declared C (Competent). Compulsory sections are when the safety of the candidate or others would be affected if incorrectly completed.

Learners will be allowed a second attempt if they fail any or both the assessments.

Learners who complete this skills programme will accumulate credits towards the relevant full or part qualification. The Credit Accumulation and Transfer (CAT) Policy may apply to these learners.

Submission of final results

Final results must be submitted to the QCTO in the required format, within 21 days of the date of the FISA, together with the following:

- Completed Assessment Verification Report on the FISA (QCTO template: relevant sections).
- Learner results spreadsheet
- A copy of the final Assessment Instrument used and the marking guideline/rubric.

9. ARTICULATION

9.1 Articulation for Skills programmes

9.1.1 Work Opportunities:

Learners who successfully complete the Renewable Energy Workshop Assistant Skills Programme will be able to access entry-level employment opportunities within the renewable energy and green economy sector.

9.1.2 Learning Opportunities:

Learners qualifying from this skills programme may further their studies by enrolling in the following qualifications and skills programmes, subject to adhering to their minimum entry requirements:

- SAQA ID: 99447: Occupational Certificate: Solar Photovoltaic Service Technician, NQF Level: 5 Credits: 344
- SAQA ID: 94619: Occupational Certificate: Hot Water System Installer (Solar Water Installer), NQF Level: 4 Credits: 67

- SAQA ID: 99559: Occupational Certificate: Wind Turbine Service Technician, NQF Level: 5 Credits:123
- SAQA ID: 120883: National Occupational Certificate: Solar Photovoltaic Standalone Systems Installer, NQF Level 4, Credits: 211
- SAQA ID: 120885: Occupational Certificate: Solar Photovoltaic Standalone System Mounter, NQF Level: 4, Credits: 84
- SP ID: 250819: Skills Programme: Solar Photovoltaic Installation Practitioner, NQF Level 4, Credits: 60
- SP ID: 250305: Skills Programme: Solar Photovoltaic Installation Planner, NQF Level 5, Credits: 60
- SP ID: 250311: Skills Programme: Solar Photovoltaic Installation Tester, NQF Level 5, Credits: 60

10. NOTES

10.1 Additional Legal or Physical Entry Requirements

None

10.2 Criteria for Accreditation

Accreditation requirements, against which Skills Development Providers (SDP) will be accredited, are found in the Curriculum Document, as listed below.

Curriculum Code:

[900524-000-01-00](#)

10.3 Encompassed Trades (where applicable)

[None](#)

11. ASSOCIATED QUALIFICATION(S)/PART-QUALIFICATION(S):

[N/A](#)