



ENGINEERING LEARNER SHIP



**SOLAR PHOTOVOLTAIC
STANDALONE SERVICE
TECHNICIAN**

120863



010 085 0918



www.zoneups.com



405 Cliff Ave, Waterkloofridge, Pretoria



BOOK NOW



1 Year Course



Classroom & Online Training



NQF Level 5 Credits 133

ABOUT THE COURSE

This occupational curriculum prepares learners to service and maintain stand-alone solar PV systems, including domestic roof-top and off-grid installations. Learners build knowledge of PV power conditioning, control gear, system design principles, maintenance, troubleshooting, fault-finding and safe repair/replacement procedures. The Solar Photovoltaic Standalone Service Technician learnership is designed to prepare learners with the technical knowledge, practical skills and workplace experience needed to maintain, service, test, diagnose and repair stand-alone solar PV systems. These systems include domestic roof-top installations, off-grid installations and other PV systems used in urban and rural environments.



Target Audience

- Learners
- Technicians
- Electricians
- Artisans
- Installers
- Assistants
- Maintenance
- Solar
- Renewable
- Trainees

PRICE

CLASSROOM TRAINING:
(PRICE ON REQUEST)

Virtual Training:

(Request a Quote)

(Includes snacks and beverages – only applicable to classroom bookings)

KNOWLEDGE MODULES

SMART ZONE

- Power plant basics, power conditioning and control, switchgear and control gear – NQF Level 4, Credits 7
- Rotating electrical machinery – NQF Level 4, Credits 5
- Mechanics, hydraulics and actuators – NQF Level 4, Credits 5
- Designing and installing grid-connected and stand-alone PV systems – NQF Level 5, Credits 7
- Maintenance, troubleshooting, fault-finding and repairs to PV systems – NQF Level 5, Credits 13

APPLICATION / PRACTICAL MODULES

- Maintain, test, diagnose and replace PV panels – Credits 4
- Maintain, test, diagnose, repair and replace inverters – Credits 4
- Maintain, test, diagnose, repair and/or replace transformers – Credits 4
- Maintain, test, diagnose and replace batteries – Credits 4
- Maintain, test, diagnose and replace cables, smart boxes, PV junction/string boxes, string diodes, connectors and fuses – Credits 4
- Maintain, test, diagnose, repair or replace tracking systems – Credits 8
- Maintain, test, diagnose, repair or replace charge controllers – Credits 4
- Maintain, test, diagnose, repair and/or replace switchgear and control gear – Credits 4

WORK BASED AREAS

SMART ZONE

- PV panels: check, test, maintain, diagnose and replace – Credits 14
- Inverters: check, test, maintain, diagnose, repair and replace – Credits 7
- Batteries: check, test, maintain, diagnose and replace – Credits 8
- Transformers: check, test, maintain, diagnose, repair and replace – Credits 4
- Cables, inter-connections, smart boxes, junction/string boxes, diodes, connectors and fuses – Credits 11
- Charge controllers: check, test, maintain, diagnose, repair and replace – Credits 8
- Switchgear and control gear: check, test, maintain, diagnose, repair and replace – Credits 8

PRACTICAL SKILLS

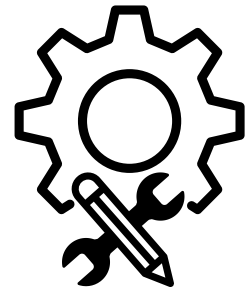
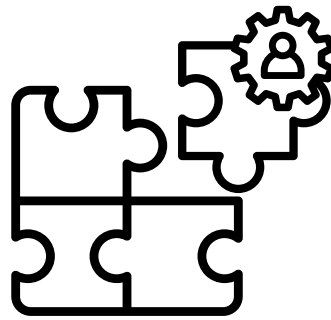
SMART ZONE

- Implement authorisation, isolation and lock-out procedures before maintenance.
- Inspect PV components visually and identify corrosion, damage, soiling, heat build-up and unsafe conditions.
- Use testing tools correctly, interpret readings and diagnose faults accurately.
- Clean, remove, repair or replace components in line with manufacturer specifications.
- Complete re-commissioning tests and maintenance reports to specification.

KEY FEATURES

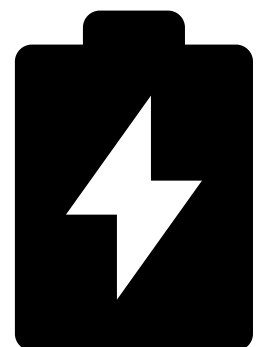
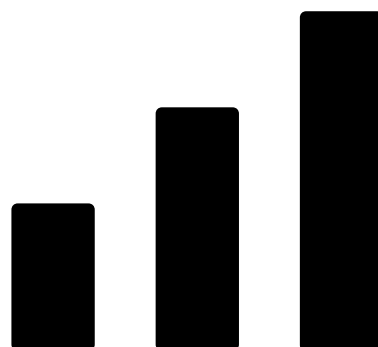
SMART ZONE

- QCTO curriculum-aligned occupational pathway
- 133 total credits: Knowledge 37, Practical Skills 36 and Work Experience 60
- Covers domestic roof-top, off-grid, stand-alone installations and PV farm contexts
- Includes maintenance schedules, PV diagnostics, troubleshooting, safety and reporting
- Assessment and workplace learning supported by experienced PV technicians or mentors



BENEFITS OF THIS LEARNERSHIP

- Develops job-ready competence for maintaining safe and efficient stand-alone PV systems.
- Strengthens technical acumen in PV panels, inverters, batteries, charge controllers and switchgear.
- Builds practical fault-finding, repair/replacement and re-commissioning capability.
- Provides workplace exposure with logbook or portfolio evidence and mentor sign-off.
- Supports compliance orientation, risk awareness, attention to detail and teamwork.





SIGN UP NOW

SIGN UP NOW AND SECURE YOUR PLACE

1. Register Online-www.zoneups.com
2. Select the training you prefer and the date you would like to attend.
3. Fill in the registration form.
4. Choose your payment method and finalize the booking.

Request a Quotation

Accreditation



*South African
Institute Of
Occupational Safety
And Health*



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Make the future count



ETDP-SETA



QCTO



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