

SE – ADVSOL Advanced Solar PV Deployment



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Entry	Solar PV	ILT / VILT	N/A

INTRODUCTION

The objective of this 1-day course is to further your knowledge by covering more advanced design, calculations and installation principles for residential and small commercial requirements.

The course objectives aim to align as best as possible to the AREP (Association for Renewable Energy Practitioners) Solar Specialist P4 quality assurance (QA) platform to promote good practice in the Solar PV sector.

AUDIENCE PROFILE

All enterprises and individuals who wish to acquire more advanced knowledge on Photovoltaics (PV), system sizing & installation of PV, regulations & standards, advance calculations, lightning & lightning protection systems.

PREREQUISITES

It is highly recommended that candidates have successfully completed our 2-Day Solar Essentials course or be AREP (Association for Renewable Energy Practitioners) P4 L1 certified.

COURSE OBJECTIVES

- Electrical Theory (Ohm's Law, Series and Parallel, Volt Drop and cable sizing, Harmonics and Power Factor)
- Irradiation
- Surge Protection and Earthing
- Power and Energy
- Temperature Co-efficients
- Batteries
- System Sizing

COURSE CONTENT

Electrical Theory

- Ohm's Law
- Series and Parallel
- Volt drop and Cable sizing
- Harmonics & Power Factor

Irradiation

- GHI vs DNI

Surge Protection, Earthing & Bonding

- Internal and External surge protection
- Risk analysis

Power and Energy

- Calculate Power requirement and Energy Requirement

Temperature Co-efficients

- Aluminium, Modules and Copper

Batteries

- Energy densities
- Charging and Discharge calculation
- Fuse calculation for batteries and for PV

System Sizing

- Standards (NRS097 limitation)
- Consumption profile
- Load



ASSOCIATED CERTIFICATIONS & EXAM

Delegates will receive a Mecer Inter-Ed attendance certification upon successfully completing this course.

AREP is host to the Solar Specialist P4 platform which tests knowledge and competence on a variety of levels. The Solar Specialist Platform **P4 Level 2**, is more advanced than the "Level 1" test and requires a more complex knowledge of principles and calculations.

Level 2 is a 2-3 hour test.

Please note that there is a fee of R350 payable to AREP to issue successful candidates with their P4 Level 2 Registered Solar PV Practitioner card that will carry a validity of 36 months. The P4 Level 2 Registered Solar PV Practitioner card will provide end customers with peace of mind that Level 2 Practitioners have the requisite knowledge to design and install solar systems according to local standards and regulations.

The P4 Platform aims to ensure that companies and individuals subscribing to the QA platform, do good quality work and through this commitment quality is assured. Quality Assurance platforms provide a way for end users to feel reassured of the level of competence and commitment of installers who subscribe to these platforms to deliver good quality products and services. More information on the P4 PV QA program can be found here: <https://arepenergy.co.za/the-pv-quality-assurance-program/>