

GREEN Solar Academy

Africa's Premier Training Institute for Solar Power



PV Off-grid Technician

Access the world of solar PV online

powered by DGS

This **eLearning course** helps you get to grips with the concepts of PV solar for off-grid systems. It is a great starting point for a career in solar and will lay the foundation for understanding more complex calculations and concepts. With this course and extra practical training at a GREEN Solar Academy, you're well prepared to start a career in the PV industry.

Begin with basic PV fundamentals and move on to more complex concepts like design, installation, maintenance & monitoring of off-grid PV systems.



Our learning portal

Our eLearning platform offers high-quality remote learning that you work through at your own pace. Information is shown on the screen and a narrator gives additional input, like an online lecturer. Content includes videos, interactive exercises, learning guides and podcasts, quizzes that test your knowledge as you go along, and a final exam.

Available in English and French.



SC 01 - PV Connected one



- What is voltage, amperage and resistance?
- What is a Series connection?
- What is a parallel connection?
- Define a "string" in a solar PV system



Depth voiced webinars guide the knowledge process



Videos and podcasts make the course more practical

SC 02 - battery sizing

Calculation Example

Calculate the required battery capacity based on the values below

$$C = \frac{E \cdot A}{DoD \cdot V_{syst}}$$

Where:

- DoD = Depth of Discharge e.g. 50%
- E = Energy consumption (daily) e.g. 5000Wh/day
- A = Autonomy days e.g. 2 days
- V_{syst} = System Voltage DC e.g. 48V

Battery Capacity: Ah

Submit

Interactive calculation exercises help to cement theory

Videos and podcasts developed in collaboration with:



PV Off-Grid Technician

A comprehensive online solar PV course



Target Audience

Anyone who wants to understand the basics of solar PV and learn about off-grid PV systems:

- People interested in solar or considering a career change
- Technicians who would like to gain basic and intermediate knowledge about solar PV
- TVET teachers and university lecturers who wish to use the eLearning material for blended learning



How it works

- Request an invoice
- You will receive log-in details upon payment and can start the course at any time
- Pass the final exam to receive a certificate
- See how eLearning works: visit the GREEN Solar Academy YouTube channel and watch our video tour of the eLearning portal

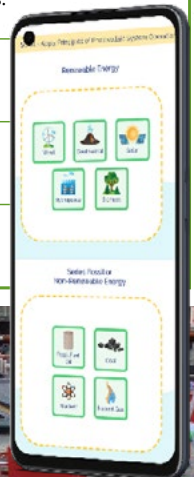
Technical pre-knowledge is not required. The online training is best rounded off with practical experience, in an internship or a practical training at a GREEN Solar Academy.



Course overview

170 Notional Hours

Learning module	Summary
Chapter 01: Apply Principles of PV Systems	General functionality of photovoltaics, single components and how they are connected. Webinars: 8 Podcasts: 2 Videos: 6
Chapter 02: Calculating system components	The sizing of off-grid PV systems and selection criteria for every system component. Webinars: 7 Podcasts: 1 Videos: 1
Chapter 03: Determining PV system Customer Requirements	The topic of site survey and load assessments starts with the theory and ends with a case study. Webinars: 3 Podcasts: 1 Videos: 2
Chapter 04: Install off grid solar PV Systems	Deals with the installation of off-grid systems as well as topics such as preparation steps, PPE and safe handling of components. Webinars: 6 Podcasts: 1 Videos: 10
Chapter 05: Diagnose, Repair and Maintaining PV System	Deals with all procedures following installation, such as commissioning, fault-finding, system maintenance and testing. Webinars: 5 Podcasts: 1 Videos: 7
Chapter 06: Monitor PV System Installation and Maintain	Learn to interpret results of online monitoring and proper project documentation. Webinars: 2 Podcasts: 1 Videos: 1
Chapter 07: Develop Business Practice	Covers client-business communication and provides basic knowledge that is relevant for business owners and managers. Webinars: 2 Podcasts: 0 Videos: 0



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