



## POWER AND ELECTRICAL TRAINING

# Solar Power Systems: Design, Installation and Maintenance

5 day course

Classroom, online or in-house

## Course overview

Solar has become the default answer to unreliable and expensive grid supply across the region, and a large number of installations underperform for reasons that were designed in. This course covers doing it properly. Delegates work through the solar resource and realistic yield estimation, module and inverter selection, and array configuration including string sizing against temperature extremes. Mounting, cabling, protection and earthing follow, along with battery sizing for systems that must carry a load through an outage. Commissioning and performance verification are covered, and the course closes on the maintenance regime that keeps output from drifting down unnoticed.

## What you will learn

- Assess the solar resource and estimate yield realistically
- Select modules and inverters against the application
- Configure arrays and size strings against temperature extremes
- Design mounting, cabling, protection and earthing
- Size battery storage for a load that must survive an outage
- Commission a system and verify performance against design
- Maintain a system so output does not drift down unnoticed

## Who should attend

- Electrical engineers and designers
- Solar installers and technicians
- Facilities and energy managers
- Project developers and consultants
- Maintenance staff responsible for installed systems

## Course outline

- 01 The solar resource and realistic yield
- 02 Module and inverter selection
- 03 Array configuration and string sizing
- 04 Temperature extremes and voltage limits
- 05 Mounting, cabling, protection and earthing
- 06 Battery sizing for outage ride through
- 07 Commissioning and performance verification
- 08 Maintenance and preventing silent output loss

## Upcoming dates

| Dates                          | Venue              | Format    | Fee per delegate |
|--------------------------------|--------------------|-----------|------------------|
| 28 September to 2 October 2026 | Online             | Online    | R8,500           |
| 4 to 8 January 2027            | Lagos, Nigeria     | Classroom | USD 1,325        |
| 1 to 5 March 2027              | Maputo, Mozambique | Classroom | USD 1,325        |

## Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** in the classroom elsewhere in Africa. In-house training is quotation on request.



Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit [www.afrisciencegroup.com](http://www.afrisciencegroup.com), email [info@afriScience.co.za](mailto:info@afriScience.co.za), or WhatsApp us on **+27 63 479 1136**.

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