



POWER AND ELECTRICAL TRAINING

Renewable Energy Integration and Mini Grid Management

3 day course

Classroom, online or in-house

Course overview

A three day course on connecting variable generation to a network and on running systems that have no network at all. Delegates work through solar and wind technology for grid applications, the effect variable generation has on stability, and the battery storage and hybrid dispatch strategies that make a mini grid operable. Mini grid architecture and rural electrification models are covered alongside interconnection standards and the compliance obligations an independent power producer takes on. Forecasting and curtailment are treated honestly as operational realities rather than failures. The course closes on the operations, maintenance and performance monitoring regimes these assets need, which is where off grid and hybrid solar projects across rural East and Southern Africa most often come undone.

What you will learn

- Assess the impact of variable renewable generation on grid stability
- Design battery storage and hybrid dispatch strategies for mini grids
- Apply grid connection standards for solar and wind independent power producers
- Evaluate forecasting and curtailment approaches for renewable heavy systems
- Plan operations and maintenance regimes for solar and mini grid assets
- Size generation and storage against a real demand profile rather than a peak figure
- Build a tariff and revenue model a mini grid can actually sustain

Who should attend

- Renewable energy engineers
- Mini grid operators
- Independent power producer technical staff
- Rural electrification project managers
- Utility integration engineers

Course outline

- 01 Solar and wind technology overview for grid applications
- 02 Grid impact of variable renewable generation
- 03 Battery energy storage and hybrid system design
- 04 Demand profiling and system sizing
- 05 Mini grid architecture and rural electrification models
- 06 Tariff design, revenue collection and financial sustainability
- 07 Interconnection standards and independent power producer compliance
- 08 Operations, maintenance and performance monitoring of renewable assets

Upcoming dates

Dates	Venue	Format	Fee per delegate
14 to 16 October 2026	Lusaka, Zambia	Classroom	USD 995
2 to 4 November 2026	Johannesburg, South Africa	Classroom	R14,950
11 to 13 November 2026	Harare, Zimbabwe	Classroom	USD 995
14 to 16 December 2026	Online	Online	R6,500



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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, email info@afri-science.co.za, or WhatsApp us on **+27 63 479 1136**.

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