



POWER AND ELECTRICAL TRAINING

Renewable Energy Integration Challenges and Solutions

5 day course

Classroom, online or in-house

Course overview

Connecting significant variable generation to a network creates problems that the network was not designed for, and African systems face them with less interconnection and thinner reserves than most. This course addresses the technical reality. Delegates work through variability and forecasting, reserve and ramping requirements, declining system inertia and frequency response, voltage and reactive power management on distribution networks with embedded generation, grid code requirements for connection, and the storage and demand response options available. Curtailment is treated honestly as an operational and commercial outcome rather than a failure, and the course closes on the planning studies required before a connection is approved.

What you will learn

- Quantify variability and apply forecasting to operational planning
- Determine reserve and ramping requirements for a given penetration
- Explain declining inertia and its effect on frequency response
- Manage voltage and reactive power on networks with embedded generation
- Apply grid code requirements to a proposed connection
- Evaluate storage and demand response as integration measures
- Specify the planning studies required before a connection is approved

Who should attend

- Utility planning and system operations engineers
- Renewable project developers and their engineers
- Regulators and grid code authorities
- Distribution network engineers
- Energy analysts and consultants

Course outline

- 01 Variability, forecasting and operational planning
- 02 Reserve, ramping and dispatch under high penetration
- 03 System inertia, frequency response and its decline
- 04 Voltage and reactive power with embedded generation
- 05 Protection implications of distributed generation
- 06 Grid code requirements for connection
- 07 Storage and demand response as integration measures
- 08 Curtailment, and the planning studies that precede approval

Upcoming dates

Dates	Venue	Format	Fee per delegate
20 to 24 September 2026	Kampala, Uganda	Classroom	R11,995
31 October to 4 November 2026	Port Louis, Mauritius	Classroom	R11,995
4 to 8 November 2026	Mbabane, Eswatini	Classroom	R11,995
30 November to 4 December 2026	Accra, Ghana	Classroom	R11,995



Fees and how to register

Online **from R6,500** per delegate, classroom **from R11,995** per delegate, 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@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

AfriScience Group | +27 61 536 6531 | info@afriscience.co.za | Pretoria, Gauteng, South Africa