

## Certified Renewable Energy Project Developer: PV-Diesel

### COURSE OVERVIEW

This course trains professionals to design, optimize, and manage PV-Diesel hybrid energy systems, which combine solar photovoltaics (PV) with diesel generators to deliver reliable, cost-effective, and sustainable power. Participants will learn to balance technical, economic, and environmental factors in hybrid projects, focusing on reducing diesel dependency, cutting operational costs, and meeting energy demands in off-grid or unstable grid environments. The curriculum covers technical design, fuel optimization, financial modeling, and regulatory compliance, preparing learners to deploy hybrid solutions for industries, utilities, and rural electrification.

### WHO SHOULD ATTEND?

This course has been specifically designed for engineers and project managers in off-grid energy, mining, telecom, or agribusiness, as well as energy consultants and EPC (Engineering, Procurement, Construction) professionals. It is also designed for utility planners and policymakers focused on rural electrification or grid stability, and sustainability officers working to decarbonize diesel-dependent operations.

### COURSE OUTCOMES

Delegates will gain knowledge and skills to:

- Design and optimize PV-diesel hybrid systems for industrial, commercial, and rural applications.
- Perform techno-economic analyses to reduce fuel consumption and levelized cost of energy (LCOE).
- Integrate energy storage (batteries) and smart control systems for efficient power management.
- Navigate regulatory frameworks, fuel subsidies, and ensure environmental compliance.
- Develop financing models for hybrid projects, including blended finance and carbon credits.
- Implement O&M strategies to extend the system's lifespan and ensure reliability.

### KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- How to design and size PV-diesel hybrid systems for various load profiles
- Tools for simulating system performance and fuel savings using software like **HOMER Pro**
- Strategies to reduce diesel runtime and cut OPEX through solar integration
- How to integrate batteries and smart controllers for optimized energy dispatch
- Techno-economic analysis methods for LCOE, ROI, and payback estimation
- Policy and compliance factors, including fuel subsidies and emission standards
- Financing approaches using **blended finance**, **carbon credits**, and donor funding
- Best practices in O&M to improve uptime, safety, and system longevity

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded