

# Renewable Energy Systems Design & Installation

## COURSE OVERVIEW

This course provides a practical and comprehensive introduction to the design, installation, and operation of modern renewable energy systems, including solar PV, wind, biomass, and hybrid solutions. The curriculum covers installation standards, regulatory requirements, performance optimization, and maintenance best practices for both residential and commercial applications. Equipping professionals with the technical skills needed to design and install renewable energy systems that support sustainable and cost-effective power generation. Participants will learn key principles of system sizing, energy storage integration, electrical configuration, and site assessment to ensure safe, efficient, and reliable deployment of renewable technologies.

## WHO SHOULD ATTEND?

The course is designed for electrical engineers, renewable energy engineers, energy analysts, project managers, and sustainability consultants. It also suits technical professionals and consultants involved in the design, installation, and management of renewable energy projects.

## COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Design and size complete solar PV and wind energy systems for different applications.
- Select and specify appropriate components including panels, inverters, and energy storage.
- Perform accurate energy production estimates and financial calculations.
- Manage renewable energy system installation and commissioning processes.
- Ensure compliance with electrical codes, standards, and interconnection requirements.
- Troubleshoot system performance issues and optimize operational efficiency.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Solar resource assessment and photovoltaic system design.
- Wind resource analysis and turbine selection criteria.
- Energy storage technologies and battery system design.
- Grid interconnection requirements and protection systems.
- Regulatory frameworks and incentive program management.
- Performance monitoring and maintenance strategies.
- Economic analysis and financial modelling for renewable projects.

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