

Co-Benefits of AI in Renewable Energy Systems

COURSE OVERVIEW

This course explores how artificial intelligence enhances the efficiency, reliability, and sustainability of renewable energy technologies while simultaneously delivering social, economic, and environmental benefits. Participants will gain insights into how AI-driven tools optimize energy forecasting, grid integration, predictive maintenance, and demand response, as well as how these advances contribute to reducing emissions, improving energy access, and fostering green economic growth.

WHO SHOULD ATTEND?

The course is designed for energy professionals, policymakers, sustainability officers, researchers, and technology innovators who are engaged in renewable energy development and deployment. It is also suitable for decision-makers in utilities, environmental organizations, and government agencies who seek to understand how AI can provide added value beyond energy efficiency, supporting broader socio-economic and environmental objectives.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the concept of co-benefits in renewable energy systems.
- Identify AI applications that enhance efficiency and resilience in renewable energy operations.
- Assess how AI-driven energy systems support emissions reduction, cost savings, and improved energy access.
- Analyze case studies demonstrating real-world AI applications in renewables.
- Develop strategies to integrate AI into renewable projects to maximize both technical and social outcomes.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- Comprehensive introduction to AI applications in renewable energy.
- Exploration of environmental, economic, and social co-benefits.
- Case studies showcasing global best practices and innovations.
- Practical tools for integrating AI into renewable energy systems.
- Interactive discussions and scenario-based exercises for applied learning.

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