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Digital Monitoring and Data Analytics in Clean Energy Operations

COURSE OVERVIEW

This course provides a comprehensive introduction to the digital tools and analytical techniques transforming clean energy asset management. It depicts how to leverage data from IoT sensors, SCADA systems, and market feeds to optimize performance, predict maintenance, and maximize the profitability and reliability of renewable energy operations. Delegates will be equipped with the practical skills to manage modern clean energy assets, using data analytics to drive efficiency, reliability, and return on investment in a competitive energy landscape.

WHO SHOULD ATTEND?

This course is designed for energy sector professionals, operations and maintenance managers, engineers, data analysts, policymakers, and decision makers involved in renewable energy and clean technology projects. It is also valuable for consultants, sustainability officers, and business leaders seeking to understand how digital transformation and analytics can be applied to achieve efficiency and performance in clean energy operations.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Master the core principles of digital monitoring and data analytics for clean energy systems.
- Analyze and interpret renewable energy asset data to drive operational decisions.
- Implement predictive analytics and AI tools for performance optimization and maintenance.
- Design digital transformation strategies that advance sustainability and decarbonization targets.
- Deploy data-driven solutions that enhance efficiency while reducing costs and downtime.
- Evaluate and integrate emerging technologies for continuous operational improvement.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- Implementing digital monitoring for real-time asset performance tracking.
- Applying analytics to optimize energy production and identify inefficiencies.
- Utilizing predictive maintenance to reduce downtime and operational costs.
- Mastering energy forecasting for grid scheduling and market integration.
- Creating actionable business intelligence from operational data.
- Evaluating cybersecurity and data integrity for operational technology.
- Case studies on wind, solar, and energy storage systems

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