

# Blockchain and Smart Contracts in Renewable Energy Trading

## COURSE OVERVIEW

This forward-looking course explores the transformative potential of blockchain technology and smart contracts in decentralizing and digitizing the energy sector. It explores the fundamentals of blockchain, the role of smart contracts in automating energy transactions and how these innovations enable peer-to-peer energy trading, improve transparency, reduce transaction costs, and support the growth of decentralized renewable energy markets.

## WHO SHOULD ATTEND?

This course is designed for energy sector professionals, utility managers, renewable energy developers, regulators, policy makers, financial and investment analysts, technology innovators, and anyone interested in leveraging blockchain solutions to enhance renewable energy systems. It is also suitable for entrepreneurs and consultants exploring business opportunities in decentralized energy markets and digital transformation of the power sector.

## COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the core principles of blockchain and smart contracts in the context of renewable energy.
- Analyze the benefits and challenges of applying blockchain to energy trading and distribution.
- Design and evaluate peer-to-peer renewable energy trading models.
- Explore regulatory, security, and interoperability considerations in blockchain-based energy solutions.
- Apply real-world case studies to assess the commercial viability and scalability of blockchain in renewable energy.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- How blockchain and smart contracts automate peer-to-peer energy trading.
- The design of a decentralized marketplace for prosumers to sell excess renewable energy.
- The application of blockchain for transparent and fraud-resistant Renewable Energy Credit (REC) tracking.
- Real-world applications and challenges through case studies like the Brooklyn Microgrid.
- The role of IoT and smart meters as critical data sources for blockchain-based energy systems.
- The key technical and regulatory hurdles to implementing these solutions in existing energy markets.
- How to evaluate the business viability and strategic impact of blockchain projects in the energy sector.

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