

# GLOBAL ENERGY TREND

Energy Trends In The Power Sector - Insights that Shape Tomorrow's Utilities

## Course Overview

The global power sector is undergoing its most rapid transformation in more than a century. The course explores how, driven by the triple forces of Decarbonization, Digitalization, and Decentralization, the sector is being redefined from generation to grid. Utilities are no longer simply delivering electricity, they are evolving into platforms for flexibility, storage, and data exchange; participants will gain insights into how economists and environmentalists are reshaping market rules to enable higher renewable penetration, why investors are shifting capital toward sustainable portfolios, and how technology providers are accelerating breakthroughs in energy storage, hydrogen, and artificial intelligence.

The instructors will demonstrate why, in this evolving landscape, utilities must rethink their generation mix, transmission architecture, and asset management strategies to remain resilient, efficient, and future-ready.

## Key Topics

- Global Energy Transition Framework
- Renewables, BESS and Energy Storage Evolution
- Hydrogen and Emerging Clean Fuels
- Smart Grids, AI, and Digital Utilities
- Transportation Electrification and Demand Transformation
- Regulatory and Market Reform
- Strategic Implications for Utilities and Asset Management

## Who Should Attend

- Business and finance professionals working with utilities or regulators
- Policy makers, legal, and regulatory staff
- Corporate sustainability and ESG teams
- Media, communication, and stakeholder-relations professionals
- Non-technical managers in energy or infrastructure firms

## Methodology

- Delivered by trusted Power Utilities thought leaders from across GCC
- Interactive workshops and group exercises
- Real life case studies
- Bilingual English + Arabic for inclusive learning across all levels

## Course Duration

- Standard: 3 Days
- The Course is conducted in-person at an agreed venue

## Certification

- Certificate of Completion issued by Kensington Institute of Training demonstrating understanding of the global Power Sector drivers and trends.



# ARTIFICIAL INTELLIGENCE IN POWER SYSTEMS

## Course Overview

Artificial Intelligence is reshaping the global power sector—transforming how electricity is generated, transmitted, distributed, and consumed.

This course simplifies complex AI concepts into clear, practical applications for utilities and energy-sector professionals. Participants will understand how AI improves forecasting, asset management, outage prediction, grid optimisation, and operational efficiency. Real examples from GCC and global utilities illustrate how AI can support better planning, decision-making, and collaboration with engineers and data scientists.

## Key Topics

- AI fundamentals for power-system operations
- Load, solar & wind forecasting using machine learning
- Predictive maintenance for transformers, cables, substations
- Outage prediction, fault detection & reliability enhancement
- Reinforcement learning for grid optimisation & dispatch
- AI-enabled asset management & digital twins
- Cybersecurity, data governance & ethical AI

## Who Should Attend

- Utility leaders, planners, and asset managers
- Policy, regulation & strategy professionals
- Grid operations, SCADA & control-room staff
- Digital transformation & data analytics teams
- Consultants, investors & technology providers
- Non-technical executives needing AI awareness

## Methodology

- Delivered by AI & power-system experts
- Demonstrations of real AI tools & dashboards
- Real case studies from GCC and global utilities
- Interactive group exercises & scenario simulations
- Bilingual English + Arabic delivery

## Course Duration

- Standard: 3 Days
- Customisable based on client needs
- Delivered in-person at an agreed venue

## Certification

- Certificate of Completion issued by Kensington Institute of Training demonstrating understanding of how Artificial Intelligence is and can be utilized to smartly manage the future Electric Power System



# ENERGY STORAGE TECHNOLOGIES AND APPLICATION

A Practical Guide for Regulated Utilities Professionals

## Course Overview

This course offers a comprehensive exploration of modern energy storage technologies and their practical applications across power systems. It begins with foundational concepts of energy storage, including key performance metrics, system design principles, and the critical role storage plays in integrating variable renewable energy. It examines major storage technologies, focusing on their operating principles, advantages, limitations, and real-world applications. Particular emphasis is placed on how different technologies contribute to grid reliability providing superior inertial response and frequency stability. The course also evaluates how storage can optimise overall electricity-sector economics by reducing peak demand, deferring costly network upgrades, improving asset utilisation, and enabling more efficient dispatch of generation resources. By the end, participants gain the technical knowledge and practical insight into energy storage solutions that enhance system stability while driving cost-effective, sustainable energy transitions.

## Key Topics

- Foundational principles of energy storage and technologies
- Grid reliability and stability contributions
- Economic and system-wide benefits of storage
- Grid services and operational applications
- Current market trends, policy, and future outlook

## Who Should Attend

- Business and finance professionals working with utilities
- Policy makers, legal, and regulatory staff
- Corporate sustainability and ESG teams
- Media, communication, and stakeholder-relations professionals

## Methodology

- Delivered by highly qualified and experienced instructors
- Interactive workshops and group exercises
- Real life case studies
- Bilingual English + Arabic for inclusive learning across all levels

## Course Duration

- Standard: 3 Days
- The Course is conducted in-person at an agreed venue

## Certification

- Certificate of Completion issued by Kensington Institute of Training demonstrating understanding of modern Energy Storage technologies and its current application in today's Electric Power System

