

# **Power Generation: Turbines, Boilers & Renewable Systems**

Oil & Gas Engineering  
Cairo (Egypt)  
19 - 23 Apr 2026

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## **Power Generation: Turbines, Boilers & Renewable Systems**

**Ref:** 3299\_131053 **Date:** 19 - 23 Apr 2026 **Location:** Cairo (Egypt) **Fees:** 3300 **Euro**

### **Course Description**

This comprehensive 5-day course provides in-depth knowledge of various power generation technologies, including traditional and renewable systems. Participants will explore turbines, boilers, co-generation, combined cycle, wind, and solar power, gaining practical insights into their operation, efficiency, and applications in the modern energy landscape.

### **Learning Objectives**

- Understand the principles and operation of steam turbines and boilers in power plants
- Analyze co-generation and combined cycle systems for improved efficiency
- Explore wind and solar power technologies and their integration into the grid
- Evaluate the environmental impact and efficiency of different power generation methods
- Apply best practices in power plant operation and maintenance

### **Course Modules**

#### **Day 1: Introduction to Power Generation**

- Overview of power generation technologies
- Thermodynamic cycles in power generation
- Energy conversion and efficiency concepts
- Environmental considerations in power generation

#### **Day 2: Steam Turbines and Boilers**

- Steam turbine types and components
- Boiler designs and steam generation processes
- Turbine and boiler efficiency optimization
- Operation and maintenance best practices

#### **Day 3: Co-Generation and Combined Cycle Systems**

- Principles of co-generation CHP systems
- Combined cycle power plant configurations
- Heat recovery steam generators HRSG
- Efficiency improvements in co-generation and combined cycle plants

#### **Day 4: Wind Power Systems**

A graphic featuring a chessboard with several chess pieces (a king, a queen, and a pawn) in the foreground. In the background, there are concentric circles radiating from a point, creating a sense of depth and focus. The text 'UK Training PARTNER' is overlaid on the image.

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- Wind turbine technology and components
- Wind farm design and grid integration
- Wind resource assessment and site selection
- Operation and maintenance of wind power systems

### **Day 5: Solar Power and Future Trends**

- Photovoltaic PV and concentrated solar power CSP technologies
- Solar power plant design and operation
- Energy storage solutions for renewable systems
- Emerging trends in power generation technology

### **Practical Wins for Participants**

- Ability to assess and optimize power plant efficiency
- Skills to integrate renewable energy sources into existing power systems
- Knowledge to implement co-generation and combined cycle technologies
- Capacity to make informed decisions on power generation investments

A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. The board is checkered, and there are concentric circles in the background.

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