

TRAINING TITLE

POWER GENERATIONS: OPERATIONS, MAINTENANCE, AND COMMISSIONING

Training Duration

5 days

Training Venue and Dates

ME335	Power Generations: Operations, Maintenance, and Commissioning	5	08-12 Dec 2025	\$5,500	DUBAI, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- **\$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course provides an in-depth understanding of the key processes involved in the operations, maintenance, and commissioning of power generation facilities. Participants will learn about the critical equipment and systems used in power plants, operational procedures, routine maintenance practices, troubleshooting, and the commissioning process. The course also covers safety protocols, regulatory requirements, and best practices to ensure the reliable and efficient operation of power generation units.

TRAINING OBJECTIVES

By the end of this course, participants will be able to:

- Understand the core processes of power generation operations, maintenance, and commissioning.
- Learn about the key systems, equipment, and technologies used in power plants.
- Develop skills for troubleshooting and resolving operational and maintenance issues.
- Gain practical knowledge of commissioning procedures and performance testing.
- Understand safety standards and regulatory requirements in power generation.
- Apply best practices for optimizing energy efficiency, reducing downtime, and ensuring safety and compliance.

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WHO SHOULD ATTEND?

- Engineers, technicians, and operators working in the power generation industry.
- Maintenance and reliability managers responsible for ensuring the efficient operation of power plants.
- Commissioning engineers involved in bringing new power plants or systems online.
- Project managers, safety officers, and anyone involved in managing or overseeing power generation operations.

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

COURSE PROGRAM:

Day 1: Introduction to Power Generation Systems

- Overview of power generation methods (thermal, hydro, nuclear, renewable).
- Key systems and equipment in power plants: boilers, turbines, generators, and electrical systems.
- Basic operational principles of power plants.
- Introduction to plant efficiency, performance metrics, and optimization.

Day 2: Power Plant Operations and Control

- Control systems and instrumentation in power plants.
- Operational procedures for different types of power plants (e.g., fossil fuel, nuclear, renewable).
- Monitoring and adjusting plant operations for optimal performance.
- Load management and grid synchronization.

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Day 3: Maintenance Strategies and Practices

- Preventive, predictive, and corrective maintenance practices.
- Maintenance of key power plant equipment: turbines, boilers, and electrical components.
- Troubleshooting common issues in power plants.
- Reliability-centered maintenance and failure analysis.

Day 4: Commissioning of Power Generation Facilities

- The commissioning process: from planning to execution.
- Key steps in the commissioning of power generation equipment.
- Testing and performance evaluation of power plant systems.
- Final inspections, operational handover, and performance optimization.

Day 5: Safety, Regulatory Compliance, and Best Practices

- Safety standards and regulations in power generation.
- Hazard identification and risk assessment in operations and maintenance.
- Environmental considerations and compliance with industry regulations.
- Best practices for ensuring the long-term efficiency and reliability of power plants.

NOTE:

Pre-& Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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