
Power Plant Operations and Management

04 - 08 Jan 2027
Madrid





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Ref.: 2008_7546 **Date:** 04 - 08 Jan 2027 **Location:** Madrid **Fees:** 5700 **GBP**

Power Plant Operations and Management is a five-day senior management course delivered by Mars Training Centre at its international training centres — in London, Dubai, Jeddah, Kuala Lumpur, and Johannesburg — designed for plant managers, generation directors, and senior decision-makers responsible for thermal, combined-cycle, and renewable power assets.

A power plant is one of the most operationally demanding industrial assets in any economy. Senior managers must balance availability and despatch against maintenance and reliability, fuel and emissions costs against revenue, and short-term performance against long-term asset life — all while operating inside an electricity market being reshaped by renewables, storage, and capacity mechanisms. Running a power asset well at senior level requires commercial and operational fluency in equal measure.

This programme equips senior power generation leaders with the structured commercial, operational, and strategic command to lead a plant or generation portfolio through the current decade. You will cover plant technology fundamentals, despatch and market interaction, reliability and maintenance discipline, HSE leadership, and the strategic positioning of generation assets in a decarbonising electricity system.

What You Will Learn

- Describe the principal power generation technologies and their operating characteristics.
- Analyse plant performance metrics: availability, heat rate, capacity factor, and reliability.
- Evaluate the commercial drivers of generation despatch and market interaction.
- Apply reliability-centred and asset-management thinking at senior level.
- Diagnose the principal HSE and operational risks in power generation.
- Assess major maintenance and outage planning at executive level.
- Interpret the impact of renewables, storage, and capacity markets on thermal assets.
- Evaluate the strategic positioning of a generation portfolio in the energy transition.
- Lead a senior generation team through operational and commercial pressure.
- Communicate generation performance clearly to boards, regulators, and offtakers.

How You Will Benefit

You will leave with a structured senior-level command of power plant operations and the commercial environment around them — sharper questions for your operations team and clearer framing for your board — and a Mars Certificate of Completion.

Your organisation will gain a senior generation leader who can lift the performance of an asset or portfolio, run major outages with stronger discipline, and position thermal and renewable assets credibly in a changing electricity system.



Who This Programme Is For

This programme is designed for senior power generation professionals, including:

- Power plant managers and deputy plant managers
- Generation directors and heads of generation operations
- Heads of asset management in power generators
- Senior commercial managers in independent power producers
- Senior project and turnaround directors in generation
- HSE and process safety directors in power assets
- Regulator and ministry officials supervising the generation sector

The seniority floor is senior manager and above.