MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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POWER GENERATION PLANT PERFORMANCE, MAINTENANCE & RELIABILITY BENCHMARKING

"\"Enhance Performance and Reliability through Effective Benchmarking and Maintenance Strategies\""

Schedule

Date	Venue	Fees (Face-to-Face)
10 – 14 Aug 2026	Singapore	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

This 5-day training program focuses on optimizing the performance, maintenance, and reliability of power generation plants. Participants will learn effective benchmarking techniques to assess their plant\'s performance against industry standards, implement strategies to enhance reliability, and optimize maintenance practices to minimize downtime. Through interactive workshops, case studies, and real-world examples, attendees will gain the necessary tools to improve the efficiency and reliability of their power generation systems.

The course will delve into industry best practices for power plant performance benchmarking, exploring how key performance indicators (KPIs) can guide continuous improvement efforts. Participants will walk away with a comprehensive understanding of how to assess and improve plant operations, ensuring long-term reliability and optimal performance

Objectives

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

- Understand key performance indicators (KPIs) for power generation plant performance.
- Apply benchmarking techniques to compare plant performance against industry standards.
- Identify areas for performance improvement in power generation systems.
- Develop maintenance strategies to enhance plant reliability and reduce downtime.
- Implement best practices for optimizing the efficiency of power plants.

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Why Attend

- Learn to benchmark your power generation plant\'s performance against industry standards.
- Gain insights into strategies for improving plant reliability and minimizing downtime.
- Understand how to develop and implement maintenance strategies that optimize plant performance.
- Improve your knowledge of key performance indicators (KPIs) in the power generation industry.
- Benefit from hands-on workshops and real-world case studies on power plant optimization.

Target Audience

This program is designed for:

- Power generation plant managers and engineers.
- Maintenance and reliability professionals in the energy sector.
- Operations managers responsible for plant performance and reliability.
- Technicians and engineers involved in power plant operations and maintenance.
- Energy efficiency and reliability improvement specialists.

Individual Benefits

Key competencies that will be developed include:

- Expertise in benchmarking power plant performance against industry standards.
- Skills in identifying areas for performance improvement and implementing corrective actions.
- Knowledge of best practices for power generation plant maintenance and reliability.
- Ability to develop and apply KPIs to assess plant efficiency.
- Proficiency in creating strategies for minimizing downtime and enhancing reliability.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced ability to assess and benchmark plant performance for continuous improvement.
- Improved plant reliability and reduced unplanned downtime.
- Effective maintenance strategies that optimize the performance and lifespan of power generation systems.
- A deeper understanding of industry best practices in power generation and performance optimization.
- Enhanced ability to apply data-driven approaches to plant performance and reliability.

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – In-depth sessions on benchmarking, performance improvement, and maintenance strategies.
- Case Studies – Real-world examples of successful power plant performance and reliability improvements.
- Workshops – Hands-on exercises to develop and apply maintenance strategies and KPIs for plant optimization.
- Peer Exchange – Group discussions on challenges faced in power generation plants and possible solutions.
- Tools – Templates and frameworks for benchmarking, performance monitoring, and maintenance strategy development.

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Course Outline

Detailed 5-Day Course Outline Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Power Generation Plant Performance and Benchmarking

- Module 1: Overview of Power Generation Plant Performance (07:30 – 09:30)
- Introduction to key performance indicators (KPIs) for power generation.
- Overview of performance and efficiency benchmarking techniques.
- The role of benchmarking in continuous improvement for power plants.
- Module 2: Industry Standards and Benchmarking Methodologies (09:45 – 11:15)
- Understanding global industry standards for power generation.
- Methodologies for comparing plant performance with industry benchmarks.
- Defining key metrics for power plant performance measurement.
- Module 3: Case Study – Successful Power Plant Benchmarking (11:30 – 01:00)
- Case studies of power plants that successfully improved performance through benchmarking.
- Module 4: Peer Exchange – Challenges in Power Generation Performance (02:00 – 03:30)
- Group discussions on challenges in plant performance and solutions.

Day 2: Maintenance Strategies for Power Generation Plants

- Module 1: Developing Maintenance Strategies for Power Plants (07:30 – 09:30)
- Importance of preventive and predictive maintenance in power generation.
- How to create a proactive maintenance strategy.
- Key factors affecting power plant maintenance performance.
- Module 2: Reducing Downtime through Effective Maintenance Practices (09:45 – 11:15)
- Strategies to minimize unplanned downtime in power plants.
- The role of condition monitoring and diagnostics in reducing plant downtime.
- Effective management of spare parts and resources for maintenance.
- Module 3: Workshop – Creating a Maintenance Plan for Power Plants (11:30 – 01:00)
- Hands-on workshop to develop a maintenance strategy for a power generation plant.
- Module 4: Case Study – Reliability Improvement through Maintenance Strategies (02:00 – 03:30)
- Real-world case studies showcasing successful maintenance strategies that enhanced plant reliability.

Day 3: Performance Optimization and Cost Reduction

- Module 1: Identifying Performance Bottlenecks in Power Plants (07:30 – 09:30)
- Common performance issues in power generation plants.
- How to identify and resolve performance bottlenecks.
- The impact of equipment and system inefficiencies on plant performance.
- Module 2: Cost Optimization Strategies for Power Generation (09:45 – 11:15)
- Cost-saving strategies for optimizing power plant performance.
- The role of energy efficiency in reducing operational costs.
- Methods to lower fuel consumption and improve plant efficiency.
- Module 3: Workshop – Cost Optimization for Power Plants (11:30 – 01:00)
- Hands-on workshop on cost reduction strategies for power generation plants.
- Module 4: Peer Exchange – Cost Management Best Practices (02:00 – 03:30)
- Group discussions on effective cost management and optimization techniques.

Day 4: Data-Driven Approaches for Performance Monitoring

- Module 1: The Role of Data Analytics in Power Plant Performance (07:30 – 09:30)
- How data analytics can optimize power plant performance.
- Overview of performance monitoring tools and software.
- The importance of data-driven decision-making in plant optimization.
- Module 2: Implementing Performance Monitoring Systems (09:45 – 11:15)
- How to implement real-time performance monitoring in power plants.
- Understanding key performance data and interpreting it for optimization.
- The role of automated systems and IoT in power plant performance monitoring.
- Module 3: Workshop – Data-Driven Optimization Plan (11:30 – 01:00)
- Hands-on workshop to create a data-driven optimization plan for a power generation plant.
- Module 4: Case Study – Success Stories of Data-Driven Performance Monitoring (02:00 – 03:30)
- Case studies demonstrating the successful application of performance monitoring and data analytics.

Day 5: Final Review and Certification

- Module 1: Review of Performance and Maintenance Optimization Techniques (07:30 – 09:30)
- Final review of key performance optimization and maintenance techniques.
- Module 2: Final Workshop – Power Plant Optimization Strategy (09:45 – 11:15)
- Final workshop to present an optimization strategy based on course learnings.
- Module 3: Course Review and Feedback Session (11:30 – 01:00)
- Review of course content and participant feedback.
- Module 4: Certificate Presentation and Course Conclusion (02:00 – 03:30)
- Course wrap-up and certificate distribution

Certification

Participants will receive a Certificate of Completion in Power Generation Plant Performance, Maintenance & Reliability Benchmarking, validating their expertise in benchmarking power plant performance, enhancing reliability, and optimizing maintenance practices.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**