**MAWA EVENTS**

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

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# ADVANCED ROOT CAUSE FAILURE ANALYSIS FOR POWER GENERATION PLANTS

*"Preventing Recurring Failures and Enhancing Reliability in Power Generation Assets"*

## Schedule

| Date | Venue | Fees (Face-to-Face) |
|---|---|---|
| 05 – 09 Oct 2026 | Singapore | USD 3,495 per delegate |

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

## Introduction

Power generation plants operate complex and high-value assets where failures can result in significant financial losses, safety risks, and supply disruptions. Effective Root Cause Failure Analysis (RCFA) is essential to identify underlying technical, human, and systemic causes of failures and to prevent their recurrence.

This intensive 5-day training provides participants with advanced RCFA methodologies specifically tailored for power generation environments. The program focuses on practical failure analysis of turbines, generators, boilers, transformers, and balance-of-plant systems, enabling participants to drive reliability improvements and sustainable operational excellence.

## Objectives

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

- Apply advanced RCFA methodologies in power generation contexts
- Identify recurring failure patterns in power plant equipment
- Analyze technical, human, and organizational failure causes
- Facilitate structured failure investigations
- Develop effective corrective and preventive actions
- Improve plant reliability, availability, and performance
- Support continuous improvement and learning culture

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## Why Attend

- Eliminate recurring failures in power generation assets
- Enhance reliability and availability of critical equipment
- Improve safety and risk management
- Strengthen analytical and investigation skills
- Learn from real-world power plant failure cases
- Support regulatory compliance and operational excellence

## Target Audience

This program is designed for:

- Power plant maintenance and reliability engineers
- Operations and production engineers
- Asset and engineering managers
- Electrical and mechanical engineers
- HSE and safety professionals
- Technical supervisors in power generation facilities

## Individual Benefits

Key competencies that will be developed include:

- Advanced failure analysis and troubleshooting skills
- Ability to lead and participate in RCFA investigations
- Improved technical decision-making
- Enhanced cross-functional collaboration skills
- Increased confidence in handling complex plant failures

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced unplanned outages and forced shutdowns
- Improved plant reliability and availability
- Lower maintenance and repair costs
- Enhanced safety and operational stability
- Stronger continuous improvement and learning culture

## Instructional Methodology

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

- Strategy Briefings – Advanced RCFA frameworks and methodologies
- Case Studies – Power plant-specific failure investigations
- Workshops – Hands-on failure analysis exercises
- Peer Exchange – Group discussions on plant reliability challenges
- Tools – RCFA templates, investigation checklists, and action tracking tools

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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: RCFA Fundamentals for Power Generation

- Introduction to RCFA principles and power plant reliability
- Failure classification and data collection
- Overview of power generation equipment and systems

Day 2: Failure Analysis of Mechanical & Electrical Systems

- Turbines, generators, and auxiliary systems
- Transformers, switchgear, and electrical protection
- Common failure modes and degradation mechanisms

Day 3: Advanced RCFA Tools & Techniques

- Fault tree analysis and cause mapping
- Human and organizational factors analysis
- Evidence validation and hypothesis testing

Day 4: Developing Corrective & Preventive Actions

- Risk-based corrective action development
- Implementation planning and accountability
- Monitoring effectiveness and performance indicators

Day 5: Sustaining Reliability & Continuous Improvement

- Preventing recurrence and knowledge management
- Building RCFA capability and culture
- Integrating RCFA with maintenance and asset management

## Certification

Participants will receive a Certificate of Completion in Advanced Root Cause Failure Analysis for Power Generation Plants, validating their advanced competence in investigating failures and implementing sustainable reliability improvements within power generation facilities.

## 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.

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

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