Global Horizon
TRAINING CENTER

Training Course:
Power Management Systems (PMS)

30 June - 11 July 2025
Kuala Lumpur (Malaysia)
Royale Chulan Kuala Lumpur

Training Course:
Power Management Systems (PMS)

Training Course code: EN235637 From: 30 June - 11 July 2025 Venue: Kuala Lumpur (Malaysia) - Royale Chulan Kuala Lumpur Training Course Fees: 10600 Euro

Introduction

As the demand for efficient, reliable, and safe power systems increases across industries, Power Management Systems PMS have become a critical component in modern electrical infrastructure. PMS is designed to monitor, control, and optimize the generation, transmission, and distribution of power within electrical networks. This 10-day training program offers a thorough understanding of PMS principles, components, and applications, aiming to empower electrical engineers and technical managers with advanced skills in power management.

Today's electrical systems must accommodate a dynamic mix of power sources, including renewable energy, conventional grids, and backup generators, while ensuring continuous and stable power delivery. PMS plays a pivotal role in managing these complexities by enabling real-time monitoring, energy optimization, and fault detection, thereby reducing downtime and improving system reliability. The integration of automation, digital control, and IoT technologies into PMS has further enhanced its functionality, allowing for predictive maintenance, load management, and enhanced cybersecurity.

In this program, participants will explore every aspect of PMS, from foundational power system concepts to advanced control and automation. The course will delve into the integration of PMS with existing electrical networks, discuss the latest PMS software tools, and provide hands-on experience with real-world scenarios. By the end of the program, participants will have the expertise to design, implement, and manage PMS that can improve energy efficiency, reduce operational costs, and ensure resilient power systems.

Learning Goals

- Grasp the fundamentals and technicalities of PMS architecture and its role in the seamless operation of electrical systems.
- Develop a comprehensive understanding of PMS components and learn how to integrate them into diverse power system configurations.
- Enhance skills in energy monitoring, fault detection, and troubleshooting within PMS.
- Master the use of advanced tools and software for PMS simulation, analysis, and optimization.
- Keep pace with emerging trends in PMS, including smart grid applications, renewable energy integration, and AI-based predictive maintenance.

Target Audience

Electrical engineers, systems designers, plant operators, and technical managers involved in power management and distribution.

Outlines

Day 1:

Introduction to Power Management Systems

- Overview of PMS in electrical systems
- Importance and applications in various industries
- System architecture and key components

Day 2:

Fundamentals of Electrical Power Systems

- Basics of electrical power generation, transmission, and distribution
- Power quality issues and their impact on PMS
- Introduction to power flow analysis and load management

Day 3:

PMS Components and Functions

- Core components: transformers, circuit breakers, relays, and sensors
- Communication protocols and interfacing devices in PMS
- Monitoring and control functions in PMS

Day 4:

PMS Design and Integration

- System design principles for effective power management
- Integration of PMS with existing electrical infrastructure
- Case studies on successful PMS implementations

Day 5:

Digital Control and Automation in PMS

- Introduction to digital control methods for PMS
- Role of SCADA, PLC, and HMI in power management

- Automation techniques for load shedding and peak shaving

Day 6:

Monitoring and Fault Detection

- Real-time monitoring and performance assessment tools
- Fault detection and diagnostic techniques in PMS
- Case studies on handling power system faults

Day 7:

Energy Optimization and Efficiency

- Methods for optimizing energy usage in PMS
- Load balancing, power factor correction, and energy storage
- Analysis of energy efficiency in various load scenarios

Day 8:

Advanced Software and Tools for PMS

- Overview of PMS software tools and platforms
- Simulation and modeling of power management strategies
- Practical hands-on training with PMS software

Day 9:

System Security and Reliability

- Ensuring reliability and safety in power systems
- Protection mechanisms and redundancy in PMS
- Addressing cybersecurity in modern power systems

Day 10:

Future Trends in Power Management

- Smart grid integration and advanced PMS technologies

- Renewable energy sources and microgrid management
- Emerging trends in IoT and AI for PMS

Registration form on the Training Course: Power Management Systems (PMS)

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Person Responsible for Training and Development

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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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