Global Horizon
TRAINING CENTER

Training Course:
Enhancing CCPP Performance

1 - 5 December 2025
London (UK)
Landmark Office Space - Oxford Street

Training Course:
Enhancing CCPP Performance

Training Course code: SC235667 From: 1 - 5 December 2025 Venue: London (UK) - Landmark Office Space - Oxford Street Training Course Fees: 6000 Euro

Introduction

The Enhancing CCPP Combined Cycle Power Plant Performance training program, developed by Global Horizon Training Center, is tailored to empower professionals in the energy sector with the essential skills and knowledge to optimize the performance of Combined Cycle Power Plants. By focusing on key concepts like Brayton and Rankine cycles, psychrometrics, and heat rate efficiency, this course bridges theoretical foundations with practical applications to maximize plant efficiency and reliability. Participants will gain actionable insights to tackle modern power generation challenges, making them indispensable assets to their organizations.

Objectives

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

1. Understand and describe the Brayton and Rankine cycles, including performance parameters.
2. Use tools like the Psychrometric Chart and Mollier Diagram for performance analysis.
3. Analyze GT Gas Turbine and HRSG Heat Recovery Steam Generator efficiency, including heat rate calculations.
4. Apply vendor correction curves to assess and enhance equipment performance.
5. Optimize combined cycle plant operations through improved start-up, operation, and shutdown processes.
6. Implement strategies to minimize operator-controllable losses and maximize plant output.

Methodology

This program employs an interactive and hands-on approach, incorporating:

- Lectures and Discussions: Engaging presentations to explain core concepts.
- Case Studies: Real-world scenarios to apply knowledge practically.
- Group Activities: Collaborative exercises to reinforce learning.
- Simulations and Calculations: Practical sessions using diagrams, charts, and vendor correction curves.
- Performance Assessments: Short tests and evaluations to ensure concept retention.

Organizational Impact

By enrolling their teams in this training, organizations will:

- Boost operational efficiency and reduce downtime.
- Improve the accuracy of performance metrics and enhance predictive maintenance capabilities.
- Empower employees with advanced analytical tools for better decision-making.
- Enhance overall plant productivity and environmental compliance.
- Develop a workforce capable of optimizing operational processes and addressing challenges effectively.

Target Audience

This course is ideal for:

- Power plant engineers and operators.
- Maintenance and reliability professionals.
- Plant supervisors and managers.
- Performance analysts and energy consultants.
- Any technical staff involved in CCPP operations and maintenance.

Outline

Day 1: Introduction to Combined Cycle Power Plants

- Overview of Combined Cycle Power Plants CCPP
- Understanding Brayton and Rankine Cycles
- Key performance parameters in CCPP
- Introduction to the Psychrometric Chart and Mollier Diagram

Day 2: Gas Turbine GT Performance Analysis

- GT simple cycle heat rate and efficiency calculations
- Vendor correction curves and their application
- Analyzing GT output under varying conditions
- GT compressor section: isentropic efficiency

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Day 3: Heat Recovery Steam Generator HRSG Efficiency

- HRSG efficiency, effectiveness, and capacity
- Input-Output and Thermal Loss Methods for efficiency calculations
- Pinch Point, Approach Temperature, and their impact on performance
- Optimizing HRSG operations

Day 4: Steam Turbine ST Cycle Optimization

- Impact of combined cycle parameters on STG cycle heat rate
- Operator-controllable losses and strategies for reduction
- Using Mollier Diagram for analyzing ST performance
- Calculating ST cycle heat rate and performance metrics

Day 5: Plant Performance Optimization and Operations

- Optimizing combined cycle plant performance: strategies and tools
- Vendor correction curves for CCPP output analysis
- Typical start-up, operation, and shutdown procedures for CCPP
- Case studies and hands-on activities for performance optimization

Registration form on the Training Course: Enhancing CCPP Performance

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

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
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Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.