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LOW-CARBON TECHNOLOGIES IN REFINING AND PRODUCTION

Start Date:	19/10/2026	**End Date:**	23/10/2026
Categories:	Oil & Gas	**Venues:**	Milan
Formats:	In Person	**Instructors:**	

OVERVIEW

This course explores a range of low-carbon technologies applicable to refining and upstream production. It provides technical and strategic insights into emissions reduction, energy efficiency, process electrification, renewable integration, and circular economy practices in hydrocarbon operations.

OBJECTIVES

By the end of this course, participants will be able to: • Identify key emission sources in refining and production operations. • Evaluate and select low-carbon technologies suited for process optimization. • Apply energy efficiency strategies and waste heat recovery methods. • Integrate electrification and renewables into conventional systems. • Support decarbonization strategies using digital tools and circular models.

COURSE OUTLINE

1. Emission Profiles and Decarbonization Challenges in Refining & Production 2. Low-Carbon Technology Options: CCS, Fuel Switching, Heat Recovery 3. Process Electrification and Renewable Energy Integration 4. Digital Tools for Emissions Monitoring and Optimization 5. Circular Economy and Industrial Symbiosis in Hydrocarbon Operations

TARGET AUDIENCE

Process engineers, energy managers, operations supervisors, and technology advisors working in upstream and downstream hydrocarbon sectors.

METHODOLOGY

Technology demonstrations, system modeling, emissions tracking labs, and strategic scenario exercises.

CONCLUSION

Participants will be equipped to identify, implement, and manage a portfolio of low-carbon

technologies that enhance efficiency and reduce emissions across refining and production operations.

DAILY AGENDA

Day 1: Emissions Landscape in Refining & Production

Understanding sources of GHGs and decarbonization challenges in oil & gas operations.

Day 2: Technology Options and Process Upgrades

Exploring CCS, alternative fuels, and low-carbon retrofitting technologies.

Day 3: Electrification and Renewables

Incorporating solar, wind, and electric systems into traditional operations.

Day 4: Digital Solutions and Performance Monitoring

Using IoT, AI, and digital twins for emissions optimization and tracking.

Day 5: Circular Strategies and Integration Planning

Designing closed-loop systems and leveraging industrial symbiosis for sustainability.

For more information, please contact us:
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