MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

FUNDAMENTALS OF HYDROGEN – PRODUCTION, STORAGE & TRANSPORT

"Unlock the Potential of Hydrogen as a Clean Energy Vector from Source to Supply Chain"

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Hydrogen is at the forefront of the global energy transition, offering a clean, efficient, and scalable energy solution. This comprehensive course introduces professionals to the fundamentals of hydrogen energy—covering production technologies, storage challenges, and transport logistics. Whether you\'re working in energy, utilities, policy, or infrastructure development, this training provides essential insights into how hydrogen fits into decarbonization pathways, national energy strategies, and industrial innovation.

Objectives

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

- Understand the hydrogen value chain from production to end use
- Compare different hydrogen production methods (grey, blue, green, etc.)
- Analyze hydrogen storage methods and infrastructure limitations
- Evaluate transport strategies: pipelines, cryogenic tankers, ammonia carriers, etc.
- Address safety, regulatory, and economic aspects of hydrogen deployment

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Why Attend

- Gain clarity on how hydrogen fits into future energy systems
- Develop knowledge to contribute to hydrogen-related projects and policy
- Understand key technologies, costs, and feasibility of hydrogen logistics
- Stay ahead in energy innovation and sustainability initiatives

Target Audience

- Energy and utility professionals
- Engineers (mechanical, chemical, process, energy)
- Infrastructure and project managers
- Policy makers and regulatory officials
- Renewable energy professionals
- Technical consultants and researchers

Individual Benefits

- Learn real-world applications of hydrogen across industries
- Strengthen your profile in a fast-emerging energy sector
- Build technical confidence to engage with hydrogen projects
- Stay up to date with international trends and safety protocols

Organizational Benefits

- Develop in-house hydrogen capacity for future investments
- Position for leadership in energy innovation and net-zero strategies
- Reduce risks in hydrogen project planning and execution
- Train staff on emerging technologies and regulatory shifts

Instructional Methodology

- Expert-led classroom sessions
- Case studies from global hydrogen projects
- Interactive technical exercises
- Short videos and simulations of hydrogen infrastructure
- Group workshops and discussion sessions

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Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1 – Introduction & Hydrogen Fundamentals

- Module 1 (07:30 – 09:30): Hydrogen as an Energy Carrier: Properties and Benefits
- Module 2 (09:45 – 11:15): The Hydrogen Value Chain Overview
- Module 3 (11:30 – 01:00): Hydrogen Use Cases Across Sectors (Industry, Transport, Power)

Day 2 – Hydrogen Production Technologies

- Module 4 (07:30 – 09:30): Grey, Blue, Green, and Turquoise Hydrogen Explained
- Module 5 (09:45 – 11:15): Electrolysis, SMR (Steam Methane Reforming), and Pyrolysis
- Module 6 (11:30 – 01:00): Production Economics, Energy Inputs, and Carbon Intensity

Day 3 – Hydrogen Storage Techniques

- Module 7 (07:30 – 09:30): Physical Storage: Compressed Gas, Cryogenic Liquid
- Module 8 (09:45 – 11:15): Chemical Storage: Metal Hydrides, Ammonia, LOHCs
- Module 9 (11:30 – 01:00): Storage Infrastructure Design and Safety Considerations

Day 4 – Transport and Distribution

- Module 10 (07:30 – 09:30): Pipeline Networks and Hydrogen Blending
- Module 11 (09:45 – 11:15): Shipping Options: Liquid Hydrogen, Ammonia Conversion
- Module 12 (11:30 – 01:00): Transport Costs, Leak Risks, and Global Logistics Models

Day 5 – Safety, Regulation, and Market Trends

- Module 13 (07:30 – 09:30): Hydrogen Safety Protocols and Incident Case Studies
- Module 14 (09:45 – 11:15): Policy Frameworks and Hydrogen Roadmaps (EU, USA, Asia)
- Module 15 (11:30 – 01:00): Final Case Study, Group Presentation, Certification Ceremony

Certification

Participants will receive a Certificate of Completion in Hydrogen Fundamentals – Production, Storage & Transport, recognizing their readiness to support hydrogen initiatives across technical and commercial functions.

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**