Training - Financial Management in the Energy Business

AGFE-EN-P | Face-to-face only | 3 days

The energy sector is changing. The energy transition is increasing the pressure on traditional Oil & Gas activities' profitability. Renewable energy value levers are changing rapidly. In this context it is important for managers of these activities to understand the stakes of the firm's financial management and its key tools in order to better contribute to the performance of their organization

Level

Knowledge

Public

Technical, business development executives, economists and young high-potential executives of Oil & Gas and renewable energy companies, as well as public administration decision makers and staff (industry, finance, energy, environment)

Objectives

Attendees will be able to implement the following skills:

- Interpret the main financial indicators of their organization to better contribute to value creation,
- Evaluate the expected profitability of investment projects,
- Understand the criteria for selecting a company's financial structure

Pedagogical & technical resources

- Exercises.
- Case studies: financial analysis of a company, evaluation of an investment project (offshore Wind farm)

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

DEFINITIONS — 0.6 day

Financial management objectives. Key performance indicators in the energy sector.
Understanding financial statements. Fundamental accounting principles. Difference between income statement and cash flow.

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VALUE MANAGEMENT — 1.7 days

Analyzing and managing the financial performance of operations. Energy companies management targets/objectives: "Total Shareholder Return", ROCE, ROE). Cost of capital. Financial analysis ratios. Dashboards. Assessing the profitability of an investment project: discounting methodology and economic indicators (NPV, IRR, Payback time...), sensitivities.

OPTIMIZING THE FINANCIAL STRUCTURE OF THE FIRM — 0.7 day

Choosing the financial structure of the firm. Gearing.
Solvability, borrowing capacity.
Examples of typical energy financing methods: project financing, green bonds.

Sessions

Rueil-Malmaison - From 10/13/2026 to 10/15/2026 **2970 €/HT**

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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IFP Training

This training course is offered under the **Alliance4Training** brand

Training - Field Operator

BOINT-EN-P | **Face-to-face only** | **60 days**

This course provides the knowledge and know-how for the specific field operator position. Successful participants will be granted the “Field Operator” IFP Training Vocational Certificate

IFP Training Certificate

Vocational Certificate

Level

Knowledge

Public

Newly recruited operators in the refining, petrochemical and chemical industries

Objectives

Attendees will be able to implement the following skills:

- Monitor the facilities in an autonomous way, in compliance with Safety and Environmental rules
- Safely perform all routine operations related to operator duties, as well as the key non-routine ones
- Identify equipment deficiencies, explain their root causes, and take appropriate action
- Communicate effectively with their colleagues

Pedagogical & technical resources

- The training program is structured by alternating: Classroom training (2-week sessions) including theoretical and practical courses and On-the-Job training (typically 1-month sessions) 100% on-site, in their facilities, with instructors' help
- Even during classroom training, lots of practical exercises and applications
- Instructors having extensive Oil & Gas downstream experience, helped by company mentors
- Continuous assessment completed by a final exam in front of a jury)

Assessment of achievements

Continuous assessment

Prerequisites

Having already been pre-recruited by an Oil & Gas company
Although not mandatory, a technical education is desirable

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

CLASSROOM TRAINING (THEORETICAL & PRACTICAL) — 55 days

Professional basic training:

- Physical parameters; liquid vapor equilibria notions; fluid flow; heat transmission.

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- Chemistry: basic notions, industrial chemical reactions.

Products and processes:

- Quality tests, specifications; sampling safety procedures; refining processes; safety aspects.
- Storage tanks, reception and expedition facilities; utilities; environmental protection; energy.

Equipment operation and safety:

- Pressure vessels (columns, drums, reactors) description and operation.
- Rotating equipment (centrifugal and positive displacement pumps, compressors, steam turbines, electric motors).
- Thermal equipment (heat exchangers, furnaces, boilers).
- Instruments (sensors/actuators), process control.

Safety in plant operation.

ON-THE-JOB TRAINING

Presentation, initial recommendations and safety instructions:

- General technical information: presentation of the refinery, main feeds and products.
- Safety: safety rules, specific instructions, control and protection, prevention, fire extinction exercises.
- Injury and life protection: preparation of rescuer degree.

General training on the job:

- On different production units: equipment identification; operation follow-up.
- Identification of operator tasks, responsibilities of each member on the shift team.

Specific job position study:

- Process, feeds and product characteristics, circuits.
- Equipment field control; safety; operational instructions, procedures.

Controlled practice in job position:

- Achievement of the various tasks involved in the job, under control of the assigned people on the shift team.

KNOWLEDGE ASSESSMENT 5 days

Continuous assessment during training modules. Final written exam at the end of the theoretical training.
Rating of practical exercises and on-the-job trainings, based on presentations and written reports.
Personal job-based final report, describing assigned unit and operator day-to-day activities, rated.
Final examination to confirm proficiency (knowledge of circuits, equipment and processes, job practice).

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Training - Hydrogen value chain and economics

ECH-EN-P | Face-to-face only | 3 days

This training allows participants to identify the main economic and contractual issues of the new hydrogen chain

Level

Awareness

Public

Executives in the oil and gas, energy or electricity sectors, or in the banking / insurance / consulting sector wishing to understand the Hydrogen industry and its economic challenges

Objectives

Attendees will be able to implement the following skills:

- Analyze the technical and economic aspects of the links in a hydrogen production chain
- Explain the basic structure of the hydrogen chain until it is commercialized,
- Identify the different hydrogen markets and their prospects.

Pedagogical & technical resources

- Quiz.
- Movies.
- Case study.
- Exercises on hydrogen costs and market prices.

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

User Friendly with the Excel spreadsheet tool.
Have a basic knowledge of economics.

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

HYDROGEN MARKETS — 1 day

Evolution of the demand for hydrogen and the resources for hydrogen production.
Fundamentals of the current hydrogen market and how it is about to change.
Current and emerging options for hydrogen production, including offshore options.

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Development of the use of hydrogen and its impact on energy markets.
New opportunities for hydrogen.
Hydrogen and electricity storage.
Evolution of hydrogen markets and price determination.
Main hydrogen markets in Europe, Africa and Asia (driving countries).
Risks for the different actors: producer, transporter, manager, buyer/importer.

TECHNICAL AND ECONOMIC ASPECTS OF THE HYDROGEN CHAIN — 1 day

Hydrogen: product, reminder of physical properties, qualities of the gas.
Design of the links in the chain: production, transport, storage, distribution, use.
Technical options for hydrogen storage and transportation, including decision factors.
Hydrogen Hazards, Hydrogen Safety Basics.
Overview of new hydrogen production projects around the world.
Order of magnitude of capital costs of investment and operation.
Innovations in the Hydrogen industry: White hydrogen, green hydrogen, ...
Calculation of the LCOH.
Workshops on concepts (Fuel Cells / Turbines / Engines) to compare their efficiency / feasibility
Exercises: Economic calculation of project production costs.

HYDROGEN VALORIZATION — 1 day

Policy and Strategy: Critical Factors in Building the Hydrogen Economy.
Factors for hydrogen to be the decarbonization fuel of choice.
Trade-offs between hydrogen use, electrification and renewable hydrocarbons.
Hydrogen as a means of transporting and storing renewable energy.
Fuel cells and their roles in transportation, the electricity grid and supply.
Hydrogen vehicles – from forklifts, trains and ships to aircraft.

CASE STUDY: ECONOMIC ANALYSIS AND PRICING OF A HYDROGEN PRODUCTION CHAIN

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Training - Energy Efficiency and Low Carbon Strategy, Industrial Solutions

ELCS-EN-P | **Face-to-face only** | **5 days**

As part of adapting their activities to the energy transition, industrial companies, particularly oil and gas firms, will need to manage CO_2 emissions and actively participate in the energy transition. This training focuses on the main challenges industries will face, both in transitioning to low-carbon energy consumption and in increasing energy efficiency. These companies will need to integrate new energies (renewables, hydrogen, etc.) into their energy mix. Furthermore, CO_2 economics must be considered when implementing their low-carbon plans

Level

Knowledge

Public

Industrial operators and national (NOC) or international (IOC) oil and gas companies. It is suitable for technical managers as well as executives and managers at all levels.

Objectives

Attendees will be able to implement the following skills:

- Integrate the new energy landscape with strategies to reduce carbon footprint
- Understand the evolution of the renewable energy sector and opportunities in this field
- Assess energy efficiency and manage its improvement potential
- Develop CCS and CCUS opportunities in future or existing projects
- Implement a roadmap for decarbonizing industrial facilities considering CO2 economics

Pedagogical & technical resources

- Questionnaires
- Team games
- Case studies
- Calculations using economics and KPIs

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

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Program

GLOBAL ENERGY LANDSCAPE — 0.5 day

Energy basics: definitions, characteristics, units, conversion factors, orders of magnitude.
Oil chain: technologies, supply and demand, prices, reserves, transition scenarios.
Gas chain: technologies, market players, producing and consuming countries, economic issues.
Case study: crude oil price.

CARBON, CLIMATE AND ENERGY STRATEGY — 0.5 day

Current scientific observations. Evolution of greenhouse gas emissions.
Other planetary environmental limits. Energy mix and CO_2 intensity of energy sources.
Case study: European energy mix. Energy trilemma concept.
Emission distribution by economic and geographic sectors. Oil & gas sector outlook in the energy transition: IEA scenarios, societal pressure, stranded asset risks.
Case study: production decline and oil investment pace.
Public actor mobilization, North-South debate, just transition concept.
Consumer mobilization. Global strategy for decoupling economic growth and carbon emissions. Debate and case study on transition scenarios.

DECARBONIZED INDUSTRIAL SOLUTIONS — 1 day

Global statistics review. Massive rise of renewables. Collapse of solar, wind, and battery costs. Shortened investment cycles, societal barriers, grid transmission impacts. Cross-over of global investment curves: green vs fossil energy.
Mixed results of a two-speed transition versus technologies and geographic sectors.
Overview of solar and wind energy. Presentation of main low-carbon sources: solar, wind, bioenergy, etc.
Case study: comparison of economic models for different electricity sources (solar, wind, gas). Economic concepts: capital cost, key performance criteria : net present value (NPV), internal rate of return (IRR), levelized cost of electricity (LCOE). Growth of competitive renewables without subsidies in the economic landscape. Practical examples.
Intermittency and energy storage: grid balancing constraints, technical and commercial challenges. Emerging solutions: hybrid projects, pumped hydro storage, utility-scale batteries. Emerging economic trends : new business models, emerging technologies, innovations.

CO2 ECONOMICS AND EMISSIVE INDUSTRIES — 1 day

State mobilization, carbon pricing markets (national/regional), European example. International economic implications, carbon market trends.
Industrial and economic actors mobilization. Corporate low-carbon strategies: role of carbon accounting (GHG Protocol). Case study for a SME, utilisation of ADEME database on emission factors in French economy. Key steps after carbon footprint assessment (emission reduction targets, action plan, integration into low-carbon strategy).
Target sectors, “hard-to-abate” industries, persistent supply-demand challenges. CCUS value chain: examples of CCS projects in Europe and the USA, costs trends, sectors applicability, impact of carbon footprint.
Technological and economic barriers to CCUS deployment, industry deployment status in France.
Hydrogen value chain: current supply and demand, hydrogen “colors” (grey, green, blue, etc.), technological and economic barriers to hydrogen economy.

LOW CARBON STRATEGY AND ENERGY EFFICIENCY — 1 day

Electrification of demand. Growth of low-carbon energy supply and electrification of demand across various sectors Case example of Global South and Sun Belt countries. Technological levers for global energy efficiency.
Gas vs renewables: competition and complementarity. Critical minerals challenge for energy transition. Environmental, economic, and geopolitical barriers.
Efficiency levers for residential, commercial, and industrial heat. Heat pump technology: residential, urban, industrial applications, technical limits. Regulatory and economic barriers.
Thermal storage technologies: practical examples and applications.

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LOW CARBON STRATEGY FOR THE OIL & GAS INDUSTRY — 1 day

Energy independence goals of importing countries as a transition driver. Impact of China's electric mobility revolution on fuel demand reduction. Oil & gas sector adaptation: examples from major companies, diverse strategic approaches.
The challenge of methane emissions and flaring reduction: differentiation by actors (majors, independents, NOCs, mining companies, utilities) and countries in their power to influence the outcome.
Emission management systems: typical emission reduction plan format for oil & gas companies.
Technological levers for operational optimization and facility design, flaring reduction, methane elimination, CCUS projects, energy efficiency, renewable energy use.
Examples and case studies with economic calculations.

Sessions

Rueil-Malmaison - From 12/07/2026 to 12/11/2026 — **4470 €/HT**

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Training - Environmental Management

ENVMGT-EN-P | Face-to-face only | 5 days

This course provides a thorough and applied knowledge of best industry standards and practices for appraising environmental matters throughout the life cycle of a field development, to implement the management of impact and risks throughout the life cycle of a project from exploration up to abandonment

Level

Knowledge

Public

Managers, advisors, engineers, and operations staff involved in management of environmental issues all along the lifetime of a field development

Objectives

Attendees will be able to implement the following skills:

- Explain the fundamentals of environmental management in terms of risks and impacts
- Describe techniques, fundamentals and contents of environmental impact assessments
- Identify mitigation measures
- Select key performance indicators, and set up environmental management plans
- Explain the content of an oil spill contingency plan

Pedagogical & technical resources

- Several applications and illustrations
- Several case studies and teamwork sessions

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

FUNDAMENTALS OF ENVIRONMENTAL MANAGEMENT — 0.5 day

Why environmental management is necessary. Concept of sustainability.
Definitions: environmental impact, significance, accidental vs. operational discharges, discharge and pollution.
Legal standards: definition, standard determination. Best available technology. Best environmental practices.

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Environmental Quality Standards (EQS), discharge standards - Regional, international, conventions.
Introduction to social management.

ENVIRONMENTAL, SOCIAL & HEALTH IMPACT ASSESSMENT — 1 day

Risk assessment: concept of hazards, risks, hazard identification and risk assessment process.
Impact assessment throughout the lifecycle of the project.
Aspect and potential impact identification.
Sources of environmental information.
Impacts on atmosphere: air pollution, GHG emissions.
Impacts on aquatic resources: water pollution and water availability.
Impacts on land resources: ground pollution and land use.
Impacts on biodiversity.
Socio-economic and cultural impact.

ENVIRONMENTAL MANAGEMENT PLAN — 0.75 day

Concept and elements.
Control measures to reduce air emissions.
Control measures to reduce water consumption and water pollution.
Control measures to reduce land pollution and use.

MONITORING & REPORTING — 0.5 day

Key performance indicators, Industry performance - Trends.
Environmental monitoring and surveillance.
Green house gases estimation and reporting.

WASTE MANAGEMENT PLAN — 0.5 day

Strategy - Type of waste.
Waste collection.
Transport and storages (primary, final...).
Treatments options (biological, thermal desorption).

MANAGEMENT OF ENVIRONMENTAL EMERGENCIES — 0.75 day

Identification of spill scenarios.
Oil spill contingency planning strategies: onshore and offshore cases.
Typical resources for oil spill contingency plans.

STAKEHOLDERS ENGAGEMENT — 0.25 day

Stakeholders identification.
Engagement and information process.
Stakeholders engagement plan review.

ENVIRONMENTAL MANAGEMENT SYSTEM — 0.5 day

Elements of environmental management systems.
Referentials and certification. ISO 14001.
EMS as part of integrated management systems.
Environmental culture and leadership in the organization.

ENERGY MANAGEMENT — 0.25 day

Introduction to energy sources.
Energy efficiency. Measures for improvement.

Sessions

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Pau - From 11/02/2026 to 11/06/2026 **4360 €/HT**

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Training - Environmental and Social Risk Management

ENVSOC-EN-P | Face-to-face only | 5 days

This course provides a thorough and applied knowledge of best industry standards and practices for appraising environmental and social matters that need to be handled cautiously throughout the life cycle of an upstream project, from design to construction and operation of Oil & Gas processing facilities

Level

Knowledge

Public

Managers, advisors, engineers and operations staff involved in oversight or management of environmental and social issues all along the lifetime of an upstream project

Objectives

Attendees will be able to implement the following skills:

- Understand the global prevailing context for the Oil & Gas industry
- Grasp legal requirements and standards with respect to impact on local environment and populations
- Understand techniques and contents of environmental and social impact assessments
- Identify mitigation measures, perform stakeholders' mapping and build public consultation and disclosure plans
- Select key performance indicators, and set up monitoring with environmental and social management plans

Pedagogical & technical resources

- Several applications and illustrations
- Several case studies and teamwork sessions

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

ENVIRONMENTAL ISSUES RELATED TO E&P ACTIVITIES — 0.25 day

Historical overview of impact awareness, management.
Definitions: environmental impact, significance, accidental vs. operational discharges, discharge and pollution.

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THE STAKES — 0.75 day

Environmental issues: local, regional, global.
Air, water (availability, pollution), biodiversity, wastes.
Kyoto protocol, carbon dioxide accounting, cap and trade, clean development mechanisms.
Toxicity, ecotoxicity.

ENVIRONMENTAL RISK ASSESSMENT (ERA), LEGAL REQUIREMENTS/LEGAL STANDARDS: NATIONAL, REGIONAL, INTERNATIONAL — 0.25 day

Environmental Risk Assessment (ERA).
Legal standards: definition, standard determination, best available technology, best environmental practices.
Environmental Quality Standards (EQS), discharge standards - Regional, international, conventions.

ENVIRONMENTAL IMPACT ASSESSMENT - PROJECTS — 0.5 day

Environmental impact assessment activities throughout the life cycle of a field, tools used for impact prediction.
The EIA process, scoping an EIA, ENVID (Environmental Hazard Identification), environmental management plan. Case study.

ENVIRONMENTAL RISK MANAGEMENT - PRODUCTION ACTIVITIES — 0.5 day

HSE MS - EMS (ISO 14001), continuous improvement processes.
Key environmental procedures: wastes management, chemical management, monitoring.
Oil spill contingency planning.

MONITORING & REPORTING — 0.5 day

Key performance indicators, industry performance - Trends.
Environmental monitoring & surveillance.
Green house gases estimation and reporting.

ENVIRONMENTAL RISK MANAGEMENT - ABANDONMENT — 0.25 day

SOCIAL ISSUES RELATED TO E&P ACTIVITIES: THE RISKS, THE STAKES & THE STRATEGIES — 0.5 day

The risks and the stakes. Some high profile cases (human rights, NGOs activism, etc.).
Documentary viewing and discussion on social risks in E&P activities.
How to change practices and image?

PARTICIPATIVE SOCIAL IMPACT ASSESSMENT AS A RISK MANAGEMENT TOOL — 0.5 day

Participative social impact assessment: definition, business case and standards, process.
Social management plans and monitoring. Focus on special topics: involuntary resettlement, local communities, business in conflict zones.

STAKEHOLDER ENGAGEMENT — 0.5 day

Stakeholder engagement: definition and business case.
Public consultation and disclosure plan (steps and techniques).
Stakeholder mapping.
Stakeholder engagement: misguiding assumptions and key success drivers.

CASE STUDY: SOCIAL SCREENING OF AN OIL & GAS PROJECT — 0.5 day

Based on a group work, participants should prepare a:

- Stakeholder mapping.
- Social impacts identification and mitigation plan.

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IFP Training

This training course is offered under the **Alliance4Training** brand

Training - Downstream Panel Operator

FBMOC-EN-P | **Face-to-face only** | **35 days**

This course makes possible a rapid mastery of panelist skills. The facilities are optimized and operated in a pro-active way Successful participants will be granted the “Panel Operator” IFP Training Certificate

IFP Training Certificate

Vocational Certificate

Level

Knowledge

Public

Experienced field operators moving to panel operator positions in refining and petrochemical plants

Objectives

Attendees will be able to implement the following skills:

- Specify the elements of communication that allow you to work effectively in a team
- Explain the process studied
- Identify risks to equipment
- List unit settings to optimize production and product quality
- Identify possible causes of process disruption
- Specify the points to be taken into account in order to prepare, start and stop a unit

Pedagogical & technical resources

- Case studies and applications on generic dynamic simulators: 80% of the time spent in the training center
- Reminding of necessary theoretical and technical fundamentals directly through simulator handlings
- Training involves on-site work and supervision from mentors in the plant
- Permanent interactive delivery method
- Some pedagogical activities of this course can take place in OLEUM's facilities (subject to availability)

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners’ understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

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Program

WELCOME (IF IN OLEUM FACILITIES)

- Welcome/safety. PPE distribution. Presentation of the training.

PANEL OPERATOR DUTIES & CONTROL ROOM ACTIVITIES — 2 days

Panel operator role within the operation team; control room staff. Reporting and handover duties.
Plant documentation: inventory, content, usage, role and duties of the panel operator.

BASIC PROFESSIONAL TRAINING — 2 days

Notions of industrial chemistry. Fluid mechanics: pressure, flowrates, fluid flow, pressure drops.
Heat exchange: exchange mechanisms, resistance to heat transfer.
Liquid-vapor equilibrium of pure substances and mixtures.
Simulators: impact of operating parameters on the chemical reaction performances, heat exchanges through various types of heat exchangers, separation in a flash drum.

PROCESS CONTROL, AUTOMATION & DCS USAGE — 6 days

Process control:

- Constitution of a control loop, symbols used. Sensors and transmitters. Control valves.
- Controllers operating principles, inputs/outputs, internal parameters and tuning.
- Complex control loops (cascade, split range, multiple calculation blocks). Advanced control basics.
- Simulators: Valves characteristic curves. PID parameters tuning. Heat exchanger duty control. Split range configuration. Behavior analysis of complex control loops.

Distributed Control System (DCS):

- Architecture and system components. Man - Machine Interface (MMI). Trends tools. Information flux between site and control room.

Automation:

- Safety instrumented systems: PSS, ESD, HIPPS, EDP; architecture and relationship with DCS. Safety logics and cause & effect matrix.
- PLCs and automation: grafcet analysis, study of specific sequences.
- Simulators: furnace safety logics.

EQUIPMENT OPERATION — 8 days

For each: working principles, technology, ancillary systems, process control scheme monitoring, operation, alarms, safety devices.
Pumps, compressors, drivers:

- Simulators: filters switch, operation of pumps; changes in operating conditions, capacity control of compressors, troubleshooting of a compressor; start-up of a steam turbine driven centrifugal compressor.

Thermal equipment: heat exchangers, air coolers, furnaces, boilers:

- Simulators: fouling of a heat exchanger; changing fuel supplied to burners, coil fouling, start-up and shutdown of a furnace.

Specific equipment for a given assignment unit (gas turbines, solid handling, extruders...).

PRODUCTS & PROCESSES — 8 days

Composition and physico-chemical properties of feeds and products.
Commercial product quality requirements, specification and standard tests. Mixing rules.
Process units: role, principles, main equipment, specific hazards. Influence of the main operating parameters on the operation, consequences on process and products. Material balance.

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Distillation, absorption, stripping.
Utilities: flare systems, air production, effluent treatment units, steam, water treatments...:

- Simulators: start-up and shutdown, operation and control of various process units (for instance: two-product distillation columns, multi draw-off distillation column, amine absorption and regeneration, sulfur recovery unit, hydrotreatment unit).

INTEGRATED PLANT SAFE OPERATION — 6 days

Panel operator safe behavior:

- Radio communication, other communication equipment. Teamwork, responsibility sharing. Transmission of know-how.
- Alertness, forward thinking plant operation. Alarm management.
- Application: role plays using the simulators (with panel operator views and FODs).

HSE in operation:

- Product, equipment and process-related risks; prevention and protection.
- Risks related to operation of equipment, to decommissioning-commissioning and start-up of equipment, specific prevention measures.
- Routine operations. Permit to work, work order, consignations and isolations.
- Special operations: SIMOPS, black start. Emergency operation and crisis management.
- Impact of plant operation on gas release into the atmosphere and on the wastewater treatment unit; minimization of releases.

Integrated plant operation:

- Steady state runs: routine checks, operating windows, integrated plant behavior (inertia, interferences).
- Global performances, margin optimization/impact of quality gaps.
- Identification, analysis and reaction to upsets and equipment failures; stabilization.

Simulators: field round on a running process unit; commissioning, start-up and shutdown procedures, justifications of different steps; inhibition management; operations in downgraded situations; practice of emergency operations.

ASSESSMENT — 3 days

Continuous assessment (including practical exercises on simulators).
Final test with real-life situation simulation exercises to validate objectives.

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Training - Gas chain economics and energy transition

GCEG-EN-P | Face-to-face only | 55 days

The natural gas market, including LNG (liquefied natural gas) in particular, has experienced strong development. This sector is impacted by the energy transition and the development of competing energies The IFP Training Certificate program in gas chain economics in this context of the energy transition provides knowledge and know-how to professionals in key disciplines solicited in upstream to downstream gas marketing development projects. It offers professionals the opportunity to acquire high-level skills in the fields of gas project economics as well as an in-depth understanding of the industrial dynamics observed in this natural gas sector

IFP Training Certificate

Graduate Certificate

Level

Knowledge

Public

All key players, engineers, market analysts, project managers, managers, professionally evolving towards a position requiring in-depth knowledge of the economic and contractual issues of the Gas & LNG chain in this context of energy transition.

Objectives

Attendees will be able to implement the following skills:

- Be aware of the components of the global gas scene
- Specify the characteristics of natural gas and detail the natural gas chain
- Be aware of the technical, operational and commercial conditions concerning shipping
- Make investment profitability analysis in the gas sector
- Identify the main clauses of gas and LNG agreements
- Understand the operational responsibilities of the actors from the chain Front-to-Back

Pedagogical & technical resources

- Highly interactive training with industry expert speakers
- Computer-simulated case studies based on gas projects
- Quizzes, videos and application exercises
- Scenario, negotiation role plays

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

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Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

MODULE 1: ENERGY ISSUES AND IMPACT ON THE GAS MARKET IN THE 21ST CENTURY — 3 days

Climate commitments.
Energy needs and climate change.
Energy transition and geopolitics.
Oil and gas vs electricity.
Oil and gas company strategies.

MODULE 2: SAVING THE GAS CHAIN AND LNG — 4 days

Natural gas in the global energy balance and the strategies of the main players in the industry.
Natural gas opportunities and emerging trends in the gas and LNG industry.
Main technical, economic and contractual characteristics of the natural gas value chain, from the production well to the final consumer.
Gas and LNG markets and their evolution (price, hedging, etc.).

MODULE 3: NATURAL GAS: TYPES, SPECIFICATIONS & PROCESSING TECHNOLOGIES — 5 days

Fundamentals of natural gas composition, characteristics, production and field processing.
Technical issues and specific constraints of natural gas transport and storage.
Review of the different end-user markets available for natural gas upgrading.
Main economic issues of the natural gas chain.

MODULE 4: LNG: RISKS, TECHNOLOGIES, AND OPERATIONS — 5 days

The LNG chain: liquefaction, transport, storage, regasification.
Specific properties of LNG - cryogenics.
Liquefaction and revaporization processes.
Vessel specifications, operation and operations.
Regasification terminals: storage, loading/unloading, regasification.
Operation of LNG facilities.

MODULE 5: ECONOMICS AND MANAGEMENT OF UPSTREAM GAS — 4 days

Key issues and constraints in contract negotiations (government, national and international companies).
Overview and analysis of the different tax systems and contractual frameworks that exist.
Main contractual and tax clauses of E&P contracts.

MODULE 6: CONTRACTUAL FRAMEWORK FOR THE MARKETING OF GAS AND LNG — 4 days

Main articles of long-term agreements on natural gas and LNG.
Key points of the commercial clauses.
Natural gas pricing and transportation principles.
Techniques for negotiating master sales and purchase contracts.

MODULE 7: PROFITABILITY STUDIES OF INVESTMENTS IN THE GAS INDUSTRY — 5 days

Development of advanced computer models for the economic evaluation of gas projects.

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Incorporation of a specific financing plan through the analysis of the return on equity.
Analysis of economic results and conducting sensitivity analyses.
Taking into account risk and uncertainty in the economic evaluation of gas projects.
Government Policies and Support Programs / Investment Incentives and Barriers.

MODULE 8: UNDERGROUND CARBON CAPTURE AND STORAGE (CCUS) AND ITS ECONOMIC IMPACT ON THE GAS CHAIN — 5 days

CCUS technologies: Where do we stand? Synergies with natural gas?
Integration of a CCUS project upstream of a gas project and development cost.
CCUS price vs carbon credit.
Profitability and financing of carbon capture and storage.
Economic impact of CCUS and carbon credits on the profitability of gas projects.

MODULE 9: INVESTMENT AND PROJECT MANAGEMENT THROUGHOUT OF THE GAS CHAIN — 5 days

Preliminary studies, conceptual studies, EPC phase and project implementation plan.
Local content and sustainable development.
Phases of a gas project. Detailed engineering of an LNG project and associated activities.
Technical contracts. Project organization, governance, interface and communication management.
HSE management, quality and risks. Project management: costs and planning.
Case studies.

MODULE 10: DOWNSTREAM GAS MARKET IN EMERGING COUNTRIES AND CONVERGENCE GAS & ELECTRICITY — 5 days

Modern natural gas markets: segmentation and regulation in emerging countries.
Operation of the downstream natural gas market.
Natural gas trading: physical market and financial market.
The role of LNG in the globalization of transactions.
Gas / Electricity: competition and convergence.

MODULE 11: FOCUS ON NATURAL GAS AND ENERGY TRANSITION — 5 days

Future of fossil fuels: Another important role for natural gas.
Natural gas value chain and carbon neutrality.
Sustainable development for gas and LNG.
Gas and LNG saving vs carbon storage.
Natural gas resource for electricity generation.

FINAL PROJECT — 5 days

End-of-study project on a theme specific to the economics of energy transition.

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Training - Low-Carbon Hydrogen - H2BC

H2BC-EN-D | Distance only | 3 days

To provide the necessary technical knowledge on hydrogen, its value chain and its production methods, making it possible to understand and anticipate the challenges of the development of hydrogen as a solution in the energy transition

Level

Expert

Public

Engineers, technical executives or project managers involved in hydrogen logistics and/or production

Objectives

Attendees will be able to implement the following skills:

- describe the different modes of production, storage and transport of hydrogen
- understand the strengths and limiting elements of each pathway

Pedagogical & technical resources

- Highly interactive synchronous training. Quiz.
- Through our LMS, training documentation, applications and complementary content are shared.

Assessment of achievements

Quiz

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

CONTEXT — 0.5 day

Brief overview of climate change: current situation, regulatory framework, impacts on businesses.
Priority applications for low-carbon hydrogen: energy carrier, chemical intermediates, industrial H2.
Hydrogen “rainbow,” low-carbon hydrogen: distinguishing between different terms, costs, orders of magnitude, advantages, and limitations.

HYDROGEN STORAGE AND TRANSPORT — 0.75 day

Physicochemical properties of hydrogen.
Regulatory aspects - Safety.
Packaging : Compression, liquefaction, hydrogen transformation .
Description of the different types of hydrogen storage:

- Buffer storage in production sites before transport.
- Natural cavities.

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- Cryogenic storage.
- Absorption or adsorption of hydrogen in a solid or liquid.

Description and use of the different modes of transport for hydrogen:

- Pipeline Transportation.
- Transport by road, rail and sea.

HYDROGEN USES 0.25 day

Hydrogen needs in the refining industry.
Hydrogen for mobility.
Manufacture of synthetic fuels.

FOSSIL HYDROGEN PRODUCTION 0.25 day

Grey hydrogen production methods: reforming and catalytic steam reforming of hydrocarbons, partial oxidation (POx), "hybrid" autothermal reforming (ATR) route:

- Schematic diagram, main operating conditions. Examples of achievements.
- Characteristics of the hydrogen produced.
- Energy considerations. Selection criteria.

FOCUS ON ELECTROLYSIS 0.5 day

Electrolysis: principles and reactions.
Presentation of the different technological blocks around the electrolyser: water treatment, hydrogen purification, storage, compressors and other equipment.
Dimensioning of the electrolyzer power supply. Specific constraints related to intermittency. Electrical auxiliaries.
The different types of electrolysers: alkaline, PEM and solid oxide:

- Description.
- Special features. Pros and Cons.
- Maturity and initial feedback.
- LCOH, Efficiencies, Current Density, and Power Requirements .

Possible recovery of the heat and oxygen produced by the electrolyser.

LOW-CARBON HYDROGEN PRODUCTION WAYS 0.75 day

Production of fossil hydrogen with CCS. The different modes of CO2 capture: cryogenics, amine process, other solvent-based processes, membrane-based processes, etc.
Water electrolysis with renewable energy.
Production from biomass: gasification.
Purchases of Renewable Certificates of Origin.
Other pathways: photoelectrolysis, native H2, plasma, etc.
Comparison of the different production methods.
Case Studies.

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Training - Low-Carbon Hydrogen - H2BC

H2BC-EN-P | Face-to-face only | 3 days

To provide the necessary technical knowledge on hydrogen, its value chain and its production methods, making it possible to understand and anticipate the challenges of the development of hydrogen as a solution in the energy transition

Level

Expert

Public

Engineers, technical executives or project managers involved in hydrogen logistics and/or production

Objectives

Attendees will be able to implement the following skills:

- describe the different modes of production, storage and transport of hydrogen
- understand the strengths and limiting elements of each pathway

Pedagogical & technical resources

- Highly interactive synchronous training. Quiz.
- Through our LMS, training documentation, applications and complementary content are shared.

Assessment of achievements

Quiz

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

CONTEXT — 0.5 day

Brief overview of climate change: current situation, regulatory framework, impacts on businesses.
Priority applications for low-carbon hydrogen: energy carrier, chemical intermediates, industrial H2
Hydrogen “rainbow,” low-carbon hydrogen: distinguishing between different qualifiers, costs, orders of magnitude, advantages, and limitations.

HYDROGEN STORAGE AND TRANSPORT — 0.75 day

Physicochemical properties of hydrogen.
Regulatory aspects - Safety.
Packaging : Compression, liquefaction, hydrogen transformation.
Description of the different types of hydrogen storage:

- Buffer storage in production sites before transport.
- Natural cavities.

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- Cryogenic storage.
- Absorption or adsorption of hydrogen in a solid or liquid.

Description and use of the different modes of transport for hydrogen:

- Pipeline Transportation.
- Transport by road, rail and sea.

HYDROGEN USES 0.25 day

Hydrogen needs in the refining industry.
Hydrogen for mobility.
Manufacture of synthetic fuels.

FOSSIL HYDROGEN PRODUCTION 0.25 day

Grey hydrogen production methods: reforming and catalytic steam reforming of hydrocarbons, partial oxidation (POx), "hybrid" autothermal reforming (ATR) route:

- Schematic diagram, main operating conditions. Examples of achievements.
- Characteristics of the hydrogen produced.
- Energy considerations. Selection criteria.

FOCUS ON ELECTROLYSIS 0.5 day

Electrolysis: principles and reactions.
Presentation of the different technological blocks around the electrolyser: water treatment, hydrogen purification, storage, compressors and other equipment.
Dimensioning of the electrolyzer power supply. Specific constraints related to intermittency. Electrical auxiliaries.
The different types of electrolysers: alkaline, PEM and solid oxide:

- Description.
- Special features. Pros and Cons.
- Maturity and initial feedback.
- LCOH, Efficiencies, Current Density, and Power Requirements.

Possible recovery of the heat and oxygen produced by the electrolyser.

LOW-CARBON HYDROGEN PRODUCTION WAYS 0.75 day

Production of fossil hydrogen with CCS. The different modes of CO2 capture: cryogenics, amine process, other solvent-based processes, membrane-based processes, etc.
Water electrolysis with renewable energy.
Production from biomass: gasification.
Purchases of Renewable Certificates of Origin.
Other pathways: photoelectrolysis, native H2, plasma, etc.
Comparison of the different production methods.
Case Studies.

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Training - Hydrogen Combustion Engine

H2COMB-EN-P | Face-to-face only | 3 days

The aim of this training course is to improve participants to the basics of operating a hydrogen combustion engine

Level
Skilled

Public
Engineers and technicians wishing to understand the basic physics of a hydrogen combustion engine and the major issues involved.

Objectives
Attendees will be able to implement the following skills:

- Understand the general context of the hydrogen economy and hydrogen as a mobility fuel
- Explain the chemical characteristics of hydrogen that influence the mixing process, ignition and combustion
- Understand the impact of hydrogen chemistry on engine performance (efficiency, pollutants, power, torque and noise)

Pedagogical & technical resources

- LMS
- Quiz

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

ASYNCHRONOUS PROGRAM TO BE TAKEN BEFORE THE SYNCHRONOUS/CLASSROOM COURSE

INTRODUCTION TO HYDROGEN & HYDROGEN IN THE CONTEXT OF MOBILITY

Hydrogen tomorrow.
Hydrogen production.

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Hydrogen mobility context.
E-fuels.

SYNCHRONOUS/PRESENTIAL PROGRAM

HYDROGEN IN THE INDUSTRIAL AND ENERGY LANDSCAPE — 0.5 day

Hydrogen as an energy carrier: trends, challenges and potential.
Hydrogen and energy networks: gas networks, multivector networks, network flexibility.
Hydrogen as an energy storage medium.
Hydrogen and e-fuels.
Positioning hydrogen in relation to other energy carriers.
Prospects for hydrogen in the energy and economic world 2025-2040.

HYDROGEN PRODUCTION — 0.5 day

The “rainbow” of hydrogen (green, gray, blue, turquoise, yellow): classification, costs, orders of magnitude, advantages and limitations.
Overview of production methods: water electrolysis, hydrocarbon reforming, photosynthesis. Opportunities and prospects.
Limits of different processes and technological prospects.
Case study:

- Calculate the carbon intensity of different H2 production methods in [kg CO2 eq /kg H2 produced].
- Based on average vehicle efficiency, calculate consumption in [kg H2/100 km].
- Calculate the CO2 impact of an FCEV and an HEV (with an ICE H2) in [g CO2 eq /km] according to the means of H2 production.
- Conclude on the advantages and difficulties of the 2 technologies.

H2 COMBUSTION ENGINE — 1 day

Chemical characteristics of hydrogen that influence the mixing process, ignition and combustion.
Impact of hydrogen chemistry on engine performance (efficiency, pollutants, power, torque and noise).
Engine technologies and technological developments required for hydrogen combustion (injection, intake, combustion, aftertreatment).
Advantages and m disadvantages of hydrogen combustion.
Virtual visit to an H2 test bench.
In-session digital teaching activity.

FILLING - OVERFILLING — 0.5 day

H2 combustion engine filling functional requirements:

- Richness.
- Cooling: EGR use - Water injection - Crankcase ventilation.

Supercharging systems:

- Possible types of supercharging on a H2 combustion engine.
- Turbocharger operation and technologies.
- Architectures.

MODELING - SIMULATION — 0.5 day

GT SIMULATOR: effect of lambda on cooling and supercharging requirements.

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Training - Hydrogen and Helium: from Exploration & sampling to valorization

H2HE-EN-P

Face-to-face only

20 days

Although Hydrogen and Helium have been considered as ancillary components of underground fluids in the past, their valorization is now key in the Energy Transition process. This course provides participants with a clear understanding of Hydrogen and Helium specificities, and also a practical knowledge on sampling and valorization challenges of these two chemical species

Level

Skilled

Public

Geoscientists, geologists, geophysicists and reservoir engineers with E&P experience, but also for any professional with Geosciences, Reservoir or Chemistry background, getting involved in hydrogen/helium-related projects, R&D program or in Energy transition projects

Objectives

Attendees will be able to implement the following skills:
Upon completion participants will be able to:

- Understand the geological context leading to H2/He underground presence
- Familiarize with sampling and chemical analysis challenges of H2/He.
- Identify underground storage types and specificities
- Apply modelling workflow on ad-hoc basins
- Review surface processing and safe transport criteria

Pedagogical & technical resources

- Interactive presentations, practical exercises, case studies involving appropriate industry software,
- laboratory visits.

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

Degree in Geosciences, Reservoir engineering, Chemistry with 2 years of experience, or equivalent experience.

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

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H2/HE EXPLORATION – PETROPHYSICAL ASPECTS — 5 days

Industrial production of H2.
Current H2 usage and future of H2.
Natural H2 Dynamics: serpentinization, underground consumption...

SAMPLING & GAS ANALYSIS – LAB ANALYSIS — 2 days

Different matrices (water, gas).
Instruments & Tools.
Analytical Workflow: on the field, in the lab, lab experiments.

UNDERGROUND STORAGE — 3 days

Natural H2-bearing reservoirs – Reservoir Evaluation and characterization.
Underground Storage types: aquifers, depleted reservoirs - Storage characteristics (gas cushion, mix...).
Examples.
Stored gas alteration.

RESERVOIR CHARACTERIZATION & MODELLING — 5 days

Thermodynamic properties.
Gas species solubility.
Stable and Metastable phases.
Kinetics of reaction.
Transport: diffusion, advection.
Basin modelling.

SURFACE TREATMENT & TRANSPORTATION — 2 days

Treatment, Surface transportation, industrial valorization.

H2 PROJECTS MANAGEMENT & REVIEW — 3 days

Case Studies.
Examples (Mali, USA, France).

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Training - Hydrogen for mobility

H2SPOC-EN-D

Distance only

12 hours

12 hours over 3 weeks

This course gives an overview to the participants about H2 context, and about the technical (functional & organic) H2 solutions for mobility

Level

Knowledge

Public

Engineers, managers and technicians who are familiar with the operating fundamentals of Powertrains

Objectives

Attendees will be able to implement the following skills:

- Understand the general context of hydrogen economy and hydrogen as a fuel for mobility
- Compare and analyse the advantages and drawbacks of a fuel cell vehicle, a hydrogen combustion vehicle, and an electric vehicle
- Identify and understand the evolution of H2 combustion engines and Fuel cells

Pedagogical & technical resources

Teaching aids:

- Videos, surveys, evaluations..
- Interactive approach
- Pedagogical activities to validate knowledge acquisition

Technical means:

- Provision of resources and tools for remote support: training platform (LMS)
- Computer resources required: a minimum bandwidth of 1.5 Mbps for a video quality in 720P. For Zoom you can consult the technical requirements by clicking on the link: https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux. For Teams you can consult the requirements by clicking on the link: https://docs.microsoft.com/fr-fr/microsoftteams/hardware-requirements-for-the-teams-app
- Technical support is provided by our training platform management team
- Our trainers provide pedagogical assistance in synchronous mode during the virtual classes. Participants' questions can also be formulated on the training platform and will be answered during the virtual classes

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

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Responsable

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Program

HYDROGEN FOR MOBILITY CONTEXT AND PRODUCTION

Hydrogen tomorrow – Interview;
Hydrogen production.
Hydrogen mobility context.
E-fuels.
Webinar Q&A.

HYDROGEN INTERNAL COMBUSTION ENGINE

Chemical characteristics of hydrogen that influence the mixing process, ignition and combustion.
Impact of hydrogen chemistry on engine performance (efficiency, pollutants, power, torque and noise).
Engine technologies and technological developments necessary for hydrogen combustion (injection, intake, combustion, after treatment).
Advantages and disadvantages of hydrogen combustion.
Webinar Q&A.

FUEL CELL VEHICLES

Fuel cells architecture.
Fuel cells introduction.
Fuel cell electrochemistry.
Fuel cells system.
Fuel cells powertain management.
Fuel cells safety.
Fuel cells conclusion.
Webinar Q&A.

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Training - Introduction to hydrogen compression

INTCOHY-EN-P | Face-to-face only | 2,5 days

This course gives the key points of hydrogen compression and compressors operation, no matter the use (hydrogen production, transportation, storage, end use)

Level

Awareness

Public

Engineering staff involved in hydrogen compression

Objectives

Attendees will be able to implement the following skills:

- Explain the influence of operating parameters on compressor performance taking into account the physical phenomena related to compression and a change in gas nature
- List the components of each compressor type and their importance to machine selection and sizing

Pedagogical & technical resources

- Interactive lecture
- Use of actual machine parts and open machines
- Study of actual drawings, cutaways, PIDs...

Assessment of achievements

Quiz

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

COMPRESSORS TECHNOLOGY — 1 day

Hydrogen compression: compressors types. Practical implementation through a given process.
Technology: Casing, stationary and rotating parts, according to the machine type.
Auxiliaries: lube oil, sealing,... according to the machine type.
Safety devices: vibrations, bearings/thrust bearing temperatures, oil pressure... according to the machine type.
Natural gas compressor technology vs hydrogen one.
Demonstrations: study of actual parts and open machines.

COMPRESSORS PERFORMANCES — 1 day

Gas Compression: key points. Natural gas compression vs hydrogen compression.
Compression mechanism through a compression stage, according to the machine type.
Operating limits, according to the machine type: discharge temperature, surge, maximum pressure...

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Performance vs operating conditions: pressure ratio, suction conditions, rotation speed...
Vibrations, critical speeds.

COMPRESSORS OPERATION AND SURVEY — 0.5 day

Flow control.
Case study: flow control vs various operating conditions.
Start-up and shutdown. Associated risks.
Compressor survey key points.

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Training - Overview of white hydrogen

INTROH2-EN-P | Face-to-face only | 3 days

Although Hydrogen has been considered as ancillary component of underground fluids in the past, its valorization is now key in the Energy Transition process. This course provides participants with a general knowledge of Hydrogen (H2) and of associated Helium (He) specificities and valorization challenges of these chemical species

Level

Awareness

Public

Junior energy professionals getting involved in white hydrogen projects.

Objectives

Attendees will be able to implement the following skills:
Upon completion participants will be able to:

- Understand the geological context leading to H2/He underground presence,
- Identify underground storage types and specificities,
- Review existing white hydrogen projects.

Pedagogical & technical resources

Interactive presentations, practical exercises, case studies.

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

NATURAL H2 WITHIN HYDROGEN BUSINESS — 0.5 day

The place of natural hydrogen in the manufactured hydrogen business: energy transition, world heterogeneity, hydrogen today, its uses in chemistry.
Its future use and growth as energy vector and source.
Price relations between manufactured and natural hydrogen.

NATURAL H2 GEOLOGY & RESERVOIRS — 1 day

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Natural hydrogen systems and geological knowledge.
Sources, migration, reactivity, accumulation and leakage.
Associated Gases (Helium, Methane...).
Dynamic perception of a blend hydrogen system.

EXPLORATION TOOLS & NATURAL H2 PROXIES — 0.5 day

Surface geochemistry, gamma spectrometry, remote sensing, active and passive seismic, magnetic anomalies, drilling and mud-logging specificities, etc.

H2 PROJECTS REVIEW — 1 day

Case Studies
Examples (Mali, Australia, USA, Brazil, Europe...)

Sessions

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Training - Economic and Financial Modelling of Renewable Energy Projects

MPER-EN-P | Face-to-face only | 3 days

This course provides a better understanding of the use of decision-making tools in the field of renewable energy projects and incorporate risk analysis in the economic & financial evaluation

Level

Skilled

Public

Economists, engineers and financial analysts concerned with decisions affecting medium and long-term cash flows, such as investment, disinvestment, acquisitions, who need to improve their understanding of the theory and practice of investment analysis in the renewable energy sector

Objectives

Attendees will be able to implement the following skills:

- To carry out investment profitability studies in renewable energy projects including all aspects of fiscal incentives, inflation, and financing up to the Levelized Cost Of Electricity (LCOE) evaluation
- To analyze the deterministic economic results and carry out sensitivity analysis
- To incorporate the risk and uncertainties in the economic evaluation of renewable projects

Pedagogical & technical resources

Case studies simulated on computers

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

ECONOMIC CRITERIA FOR DECISION MAKING — 1.5 days

Cost of capital and discount rate, value creation.
Economic criteria for project evaluation: net present value (NPV), internal rate of return (IRR), payback period, etc.
Methodology for assessing the global profitability of capital invested.
Impact of taxation and inflation on economic indicators.

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Choosing an investment program with a limited budget, scarcity cost of capital.
Case studies: solar photovoltaic & wind power plant projects

ECONOMIC COST ANALYSIS — 0.5 day

Accounting cost vs. economic cost. Total discounted cost, annual economic cost.
Unit economic cost analysis vs. Levelized cost of electricity (LCOE).
Optimal economic lifetime (average cost & marginal cost).
Cases studies: LCOE of power plants, definition of an optimal economic lifetime.

IMPACT OF FINANCING ON PROJECT ECONOMICS — 0.5 day

Financing of renewable energy projects (ring-fencing and SPV concept).
Project finance valuation for renewable energy projects.
Different financing plans and debt repayment.
Return on equity (IRR and NPV of equity) and financial leverage.
Determination of the optimal electricity tariff leading to project economics balance.
Case studies: Solar photovoltaic and wind farm projects with specific financing.

RISK ANALYSIS OF RENEWABLE ENERGY PROJECTS — 0.5 day

Overview of resource assessment in renewable projects (wind & solar).
Probabilistic distribution approach (statistical & seasonal analysis of production, P99, P90 & P50 statics).
Risk matrix, risk classification and strategies for risk mitigation.
Risk evaluation using break-even price and sensitivity analysis.
Risk analysis using spider and tornado diagram.

CASE STUDIES

Solar photovoltaic project.
Wind power plant project.
Equipment optimal economic lifetime.
Power plant project.

Sessions

Rueil-Malmaison - From 12/09/2026 to 12/11/2026 — **3380 €/HT**

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Training - Overview and Challenges of the Energy Mix

MXE-EN-P | Face-to-face only | 4 days

This course aims to provide an updated overview of the energy sector and the upcoming economic, political and environmental challenges (Covid-19, climate change, supply and demand crisis, unconventional Oil & Gas...). Participants will get a complete overview of both fossil fuels and renewable energy sources, with their respective benefits and burdens

Level

Knowledge

Public

Engineers from the energy sectors (oil, gas, renewables, power), industrial partners, executives (banking, insurance, consulting), public administration staff, PhD and postgraduate students

Objectives

Attendees will be able to implement the following skills:

- Describe the main stages (upstream, downstream, trading) of the oil and gas sectors and understand the technical and economic characteristics of hydrocarbons (production, outlets, availability, market)
- Analyze the advantages and disadvantages of each energy and interpret the evolution of factors affecting the supply and demand of the energy mix
- Identify the actors of the energy scene and their strategic lines (states, international organizations, public and private companies in the sector)
- Understand the role of renewable energies in the energy mix (maturity, intermittency, carbon footprint)

Pedagogical & technical resources

- Quiz and videos on the fundamentals of the energy sector
- Board game about the different steps of an oil or gas project
- Team game on the composition of the energy mix and the role of renewables
- Team game on factors affecting crude prices, the upstream sector and trading

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

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INTERNATIONAL ENERGY SCENE — 0.5 day

Energy resources: definition, characteristics, conversion factor.
Climate change & energy transition: supply/demand asymmetry, Kaya's identity analysis.
Short and long-term forecasts (Covid-19 crisis, supply situation, climate change) and IEA scenarios.

OIL SECTOR ISSUES — 1 day

Stakeholder's strategy: NOC, IOC, majors, international organizations.
Upstream: stages and technical-economic aspects of the Exploration-Production.
Oil contracts and principles of oil rent sharing.
Downstream: refining economics and margins, capacity and new projects.

GAS SECTOR ISSUES — 1 day

Structure of the gas value chain: production, treatment, transportation, storage.
Pros and cons: natural gas and LNG in the energy transition.
Markets & grids, introduction to gas contracts.
Focus on current trends: crisis, market, evolutions, technological breaks...

RENEWABLES ISSUES & ENERGY TRANSITION — 1 day

Overview of the main renewables: solar, wind, hydro, bio, geothermal.
Comparison and competition: outputs, costs, availability, pros, limits.
CCUS technology and use of renewables in the Oil & Gas sector.
Stakeholders' strategy and supply chain presentation.

CASE STUDIES — 0.5 day

Economic calculations on Oil & Gas and renewables projects.
Opex, capex, revenues, assumptions, taxable income, cash flows, IRR.

Sessions

Rueil-Malmaison - From 09/29/2026 to 10/02/2026 — **3360 €/HT**

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Training - Commissioning and Start-Up of Process Units

OPDEM-EN-P | Face-to-face only | 5 days

Prepare participants to manage commissioning and start-up operations

Level
Skilled

Public
Supervisors, engineers and technicians of oil/chemical companies or engineering, involved in the commissioning and start-up of new units

Objectives
Attendees will be able to implement the following skills:

- Present pre-commissioning, commissioning and start-up activities on a project from the perspective of their programming and management
- Specify the basis for supervising or delegating activities in a context of mastering the specific constraints related to these operations

Pedagogical & technical resources
Cases studies on the precommissioning, commissioning and start-up of typical units

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

PROJECT BACKGROUND & COMMISSIONING PHASES — 2 days

Main phases of a project.
Engineering studies (FEED, Detail) and anticipation of commissioning activities.
Project contract type and impact on commissioning activities.
Integration of commissioning activities into the project process: mechanical completion, pre-commissioning, commissioning and start-up activities during the project steps.

ORGANIZATION — 1 day

Commissioning procedures. Interfaces with the different engineering disciplines according to the types of

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contract.
Plant/project breakdown into systems and subsystems. Execution plan for commissioning and start-up. Setting up of commissioning/start-up teams. Split of responsibilities. Preparation of the list of precedents. Start-up phases: pre-commissioning, commissioning and preparation for start-up, performance tests, provisional acceptance, mechanical guarantees, final acceptance. Hand over.

SAFETY — 0.25 day

Risks related to the auxiliary fluids and the introduction of hydrocarbons. Risk evolution between construction, commissioning and start-up. Control of the risks related to modifications during the different phases.
Pre-Start-up Safety Review (PSSR).

END OF CONSTRUCTION - PRECOMMISSIONING — 0.75 day

Precommissioning activities: static verification of equipment, hydraulic tests and equipment cleaning, involvement of operations in the mechanical completion, punch-list, actions follow-up and close out.

COMMISSIONING — 0.75 day

Commissioning activities. Cleaning, flushing, blowing and drying. Dynamic testing.
Synchronization of control loops and Programmable Logic Controller (PLC).

START-UP & ACCEPTANCE — 0.25 day

Start-up permit: checks required before oil-in. Leak tests, air removal, raw materials introduction.
Transition towards industrial production: performance tests, temporary and final acceptance, responsibility transfer.

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Training - Overview and challenges of renewable energies

PANENR-EN-P | Face-to-face only | 3 days

This training provides a global vision of renewable energies, their share in the European and global energy mix, as well as a technical and economic overview of the available solutions

Level

Awareness

Public

People interested in the energy transition, renewable energies and decarbonation issues

Objectives

Attendees will be able to implement the following skills:

- Briefly describe the techniques used in the different renewable energy production sectors
- List the main advantages and disadvantages of these production chains

Pedagogical & technical resources

- Provision of introductory material prior to the training course
- Sub-groups activities, business cases, educational games
- Illustration by concrete industrial cases and current events

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

ENERGY TRANSITION AND CURRENT CONTEXT — 0.5 day

World energy scene: supply & demand, actors, findings and perspectives.
The place of renewable energy in the French, European and global energy mix.
Neutrality, budget and carbon bubble: commitments, constraints, risks and opportunities.
Energy & Climate: decarbonation and electrification.

SOLAR ENERGY — 0.5 day

Different production methods: thermodynamic, photovoltaic, thermal, passive.

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Technology and state of the art - Main production sites and current projects.
Main applications.
Cost of electricity production and GHG emissions during the life cycle.
Application: Sizing of a production plant.

WIND ENERGY — 0.5 day

Different production methods: Onshore – Offshore – Floating. Advantages and disadvantages.
Different types of wind turbines. Principle of operation.
Technology and state of the art - Distribution of production in the world.
Cost of electricity production and GHG emissions during the life cycle.
Application: Analysis of a production site.

BIOENERGIES — 0.5 day

Biomass, Biogas and Biofuels - Associated technologies and end uses.
Place of bioenergy in France and in Europe.
State of the art and main projects in progress.
Cost of electricity production.
Application : Production of biogas by methanization.

MARINES ENERGIES — 0.25 day

Main production methods: hydroelectricity, tidal, current, wave, osmotic.
Current state of art and main projects underway.
Cost of electricity production and life cycle GHG emissions.

GEOTHERMAL ENERGY — 0.25 day

Geothermal energy for power and heat production - Main technologies.
Advantages and disadvantages - Impact on the environment.
Integration with existing production sites.
Cost of electricity production and life cycle GHG emissions.

HYDROGEN INDUSTRY — 0.5 day

Hydrogen: an energy carrier.
The different colors of hydrogen depending on the production method.
End use of hydrogen. Constraints of use.
State of the art and main projects in progress.

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Training - Hydrogen Chain Outlook

PFH-EN-P | Face-to-face only | 2 days

To give the overall elements allowing to understand and to anticipate the stakes of the development of hydrogen as a solution to the energy transition: decarbonization of the industry, transport as well as the storage of renewable electricity

Level

Knowledge

Public

The training is dedicated to professionals involved in the energy sector : engineers, financial managers, senior executives and senior officials from the public administration

Objectives

Attendees will be able to implement the following skills:

- have an overview of the hydrogen sector
- describe the role of hydrogen in the energy transition

Pedagogical & technical resources

- Quiz
- Sub-groups activities and case studies

Through our LMS, the following are shared or made available:

- introducing content, a few days before the training, to save time and efficiency
- training material, applications and additional content

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

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Program

HYDROGEN WITHIN THE ENERGY TRANSITION — 0.5 day

Climate change: state of play, regulatory framework, impact on companies.
Reduction of carbon intensity in the energy mix: constraints, commitment to carbon neutrality, carbon taxation.
Hydrogen: definition, physicochemical properties, orders of magnitude.

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Presentation of the value chain: supply, demand, import-export, stakeholder.
Hydrogen as an energy carrier: focus, challenges and capabilities

HYDROGEN PRODUCTION — 0.5 day

Green, grey, blue, yellow ,low carbon hydrogen: classification, costs, orders of magnitude, advantages and limits.
Outlook of production methods: hydrocarbon reforming process, CCS integration, electrolysis of water, prduction from biomass, photo-emlectrolysis.
Production of decarbonized H2: native H2, combustion in situ, plasma torch.
Limits of each process and technological perspectives.

HYDROGEN STORAGE & TRANSPORTATION — 0.5 day

Compression and liquefaction : fundamentals, constraints and consequences
Solid storage, liquid storage, pressurized gas storage.
Direct-attached storage, surface and subsurface, filling.
Market structure: production hubs, distribution and transport networks.
Environment and safety: accidentology, risks analysis, aggravating factors.

APPLICATIONS - OPPORTUNITIES AND CHALLENGES TO OVERCOME — 0.5 day

Hydrogen and industry: feedstock and fuel for industry: refining, petrochemistry.
Hydrogen and energy networks. Combination with gas, electricity and heating networks.
Electricity storage and injection into networks. PtG, PtL, PtP, PtX concept.
Hydrogen and mobility: fuel cell, combustion engine.

- Hydrogen and thermal engine: light vehicle, heavy vehicle, off-road applications.
- Hydrogen and electric propulsion: light, medium and heavy duty vehicles; rail; marine.
- Hydrogen and aeronautics.

Comparison between actors and stakes for different countries (for example France, Germany, USA, China).
Outlook and forecasts: supply chain structuration, technology strategies and investments, penetration scenarios.

Sessions

Rueil-Malmaison - From 05/19/2026 to 05/20/2026 — **2460 €/HT**

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Training - Practicing Commissioning

PRACOM-EN-P | Face-to-face only | 4 days

This course provides practical knowhow so as to get the participants directly confront the reality of the field

Level

Knowledge

Public

Operating and technical staff in charge of commissioning and start-up operations on field

Objectives

Attendees will be able to implement the following skills:

- Anticipate the risks while commissioning and start-up operations
- Identify the key points of the most current operations
- Proceed to main pre-commissioning and commissioning activities

Pedagogical & technical resources

- Experience sharing through applications and cases studies on Oil & Gas units
- Cases studies on the precommissioning, commissioning and start-up of units
- Analysis of incidents occurred while precommissioning, commissioning or start-up phases

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

COMMISSIONING & START-UP PHASES IN PROJECT CYCLE — 0.5 day

End precommissioning, mechanical completion, commissioning, ready for start-up, start-up permit, performance test runs, temporary and final acceptance.
Commissioning and start-up: a non-linear schedule. SIMOPS. Input data and reference documentation. Punch lists. Management of Change (MOC).

SPECIFIC RISKS TO COMMISSIONING & START UP — 0.5 day

Fluid behavior and energy associated hazards. Chemical and physical hazards. Flammability.

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Main risks induced by equipment, such as rotating, pressure vessels, thermal or naked flame equipment.
Risks related to utilities start-up: inert gas, nitrogen, steam, instrument air, water, fuel gas, diesel.
Risks evolution from construction to start-up. Transient phases. Safety reviews. Managing leaks.

WHAT TO DO BEFORE COMMISSIONING PROCESS UNITS — 1.5 days

End of construction: visual control and checks for static and rotating equipment (no energy, no fluid). Cold clamping. Check of installation standards for piping and instrumentation.
Precommissioning activities: hydraulic tests and process equipment cleaning.
Mechanical completion.
Particular case of Utilities facilities: pre-commissioning, commissioning and start-up (ready for operations).

COMMISSIONING OF PROCESS UNITS & START UP — 1.5 days

Chemical cleaning, flushing and blowing. Equipment drying and dynamic testing.
Particular case of instrumentation - Loops and DCS tests. Synchronization.
Preparation for the start-up of rotating equipment.
Prestart-up checks before oil-in. Plant line-up and test run.
Start-up: leak tests, air removal, oil-in. Heating up and hot bolting.
Update of documentation.

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Training - Developing a low Carbon Strategy: From Carbon Footprint Measurement to transition Plan

SBC-EN-P | Face-to-face only | 3 days

Since the Paris Agreement, countries have agreed on a global warming threshold that should not exceed 2°C above 1850 levels by 2100. This implies, first and foremost, reducing anthropogenic GHG emissions, which governments are translating into their own legislation. Companies must therefore transform and act to measure their carbon footprint and build a robust climate strategy

Level

Knowledge

Public

Anyone wishing to discover and/or deepen their knowledge of GHG emissions quantification and reporting methods (GHG Protocol, Bilan Carbone®, ISO 14064/69).
This course is aimed at: company and engineering office staff working as HSE or CSR coordinators, project managers & consultants on sustainability

Objectives

Attendees will be able to implement the following skills:

- Master the main principles of a carbon footprint assessment.
- Differentiate between the different available national & international standards for carrying out your company's carbon footprint (GHG Protocol, Bilan Carbone®, ISO 14064/69).
- Identify the key stages following the completion of a carbon footprint (emissions reduction target, action plan, integration into low-carbon strategy .... etc.).

Pedagogical & technical resources

- Quiz.
- Case studies.

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

Basic knowledge on climate change and MS Office Excel.

Responsable

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Program

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WHY TAKE THE DECARBONIZATION ROUTE — 0.5 day

Identify the causes and consequences of climate change.
Understand the nature of climate change.
Climate change and its impact on business.
Identify the challenges raised by the energy transition.

KEY STEPS IN A CARBON FOOTPRINT ASSESSMENT — 1 day

Identify regulatory requirements for carbon footprint.
Carbon accounting standards (GHG Protocol, Bilan Carbone®, ISO 14064/69).
Describe the objectives of a carbon footprint.
Identify the scope of the carbon footprint (organizational, operational and temporal).
Drawing up flow maps.
Data collection and processing.
Handling carbon footprint measurement units.
Interpreting the results of a simple carbon footprint case study.
List existing reporting formats for publishing carbon inventory.
Case study: Evaluating a company's GHG emissions according to carbon accounting standards.

HOW TO SET A GHG REDUCTION TARGETS — 0.5 day

Identify the steps that follow a carbon footprint (emission reduction target, action plan, contribution to carbon sequestration, etc.).
Define the notion of carbon neutrality within the SBTi framework (Science Based Target Initiative).
Setting a science-based GHG reduction targets (commitment timeframe and scope).
Examples of targets setting according to SBTi standards (Absolute Approach ACA and Sector Approach SDA).

HOW TO BUILD A LOW CARBON ROADMAP — 0.5 day

Diagnose the risks and opportunities of the ecological transition.
Diagnose physical risks.
Define a strategy and an ecological transition project.

SETTING A TRANSITION PLAN — 0.5 day

Identification of potential actions to implement the strategic plan.
Selection of the most relevant set of actions for implementation.
Identify the levers for actions within the company, depending on its structure and sector.
Monitoring and guiding the implementation of the action plan.
Case studies: Building a company's transition plan according to international standards.

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Training - Social Risk Management

SOCIAL-EN-P | Face-to-face only | 5 days

This course aims to identify and understand social issues related to Oil & Gas activities

Level

Knowledge

Public

Managers, advisors, engineers, and operations staff involved in oversight or management of operational, environmental and social issues throughout the lifetime of an upstream project

Objectives

Attendees will be able to implement the following skills:

- Identify and understand what constitutes a social risk (non-technical risk), an impact assessment and management
- Understand key concepts related to SIA and Social Impact Management Plans (SIMPs)
- Understand social management methodologies and their appropriate uses
- Design and implement of a stakeholder engagement strategy and plan
- Understand the main components of a Social Impact Management Plan (RAP, local content, etc.), including design and implementation

Pedagogical & technical resources

The training will have an interactive format providing room for practice and discussion. It will involve multimedia presentations, case studies, quizzes and teamwork sessions

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

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Program

SOCIAL ISSUES RELATED TO OIL & GAS ACTIVITIES: RISKS, STAKES & STRATEGIES — 1 day

Risk of overlooking non-technical risks.
How to spot non-technical risks?

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How to identify and understand the underlying mechanisms?
How to manage social risks?
Oil & Gas industry reaction to underlying mechanisms.
Why and how should they be managed as a risk and an opportunity?
Key risks areas for Oil & Gas industry and developed standards: transparency and corruption, business and human rights, operations in areas of conflict, etc.

STAKEHOLDER ENGAGEMENT — 1 day

Social License to Operate (SLO).
How to build this SLO?
What is the Free Prior & Informed Consent (FPIC) principle?
Stakeholders-business interactions analysis.
How to do a stakeholder analysis and mapping?
How to design and implement a stakeholder engagement plan?
How to design, implement and monitor a grievance mechanism?
What are the do's and don'ts in stakeholder engagement?

PARTICIPATIVE SOCIAL IMPACT ASSESSMENT AS A RISK MANAGEMENT TOOL — 1 day

Conceptual framework and techniques used for Social Impact Assessment.
International standards.
Definition of a social impact.
Links between environmental and social impacts.
Predict, analyze and assess the likely social impacts pathways and evaluate their significance.
Develop a mitigation strategy for negative impacts and an enhancement strategy for the project-related opportunities.
How to monitor social impacts?
How to assess a SIA quality?
How to achieve the full potential of a SIA?

SOCIAL IMPACT MANAGEMENT PLANS & MONITORING: TOOLS & PROCESSES — 0.5 day

Social Impact Management Plans (SIMP).
The main components of a SIMP.
How can a SIMP be operational?
What are the organizational and institutional arrangements that need to be developed?
The role for the project's stakeholders in a SIMP?
Implementation and results monitoring and reporting.

SOCIAL IMPACT MANAGEMENT PLANS & MONITORING: FOCUS ON SPECIAL TOPICS & ISSUES — 1 day

Depending on the audience's needs and expectations, a focus can be put on specific social issues and how to manage them through specific social impact management plans: Resettlement Action Plan (RAP), Community Development Plan and Social investments, local content, etc.

CASE STUDY: SOCIAL SCREENING OF AN OIL & GAS PROJECT — 0.5 day

Through a work in group, the participants will do a stakeholder mapping, a high level impact assessment with the use of a mind mapping and an identification of potential impacts and mitigation strategies.

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