# Training - Energy and Climate Change

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

This training will enable participants to better understand the evolution of the energy mix and the pros and cons of various alternative energies. An overview of the main regulatory and fiscal mechanisms introduced, as well as the evolution of green finance, complete this curriculum in order to address the issue of energy transition from a technical, economic and societal perspective

## Level

Knowledge

## Public

- Private sector personnel responsible for strategic planning, market analysis (regulation mechanisms and price creation), energy procurement, financing and management of energy projects to anticipate technical constraints, to understand the risks (economic, legal, technical, environmental, geopolitical)
- State organisation in charge of energy policy choices, subsidies and/or promotion, as well as those in charge of missions within administrations and local authorities

## Objectives

Attendees will be able to implement the following skills:

- raise awareness of the global challenges of the energy transition and analyse the long-term changes in the energy mix and its impact on climate change
- understand public policies, their impact on the environment and understand the global societal challenges of renewable energies

## Pedagogical & technical resources

- Quiz on the different renewable energies
- Videos
- Case study
- Examples of practices in various countries

## 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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## WHY MAKE AN ENERGY TRANSITION NOW? 1 day

Evolution of the energy scene: myths and realities:

- Energy as a resource to be shared: the changing energy landscape up to 2050.
- Energy demand and economic growth.
- Theory and threat of global warming, growth of CO2 and GHG emissions.
- Problems of energy access.
- The new geopolitical challenges associated with renewables: emissions reduction, security of supply and competitiveness.

Environmental impacts and climate change challenges:

- International negotiations on climate and the environment: history and prospects.
- Diversity of public action: environmental policy tools.
- Energy demand and economic development: principles of sustainable development and the circular economy.
- Prospects for alternative mobility (electric, gas, hydrogen, biofuels) and challenges of electromobility.

Techno-economic and financial instruments for environmental management:

- The levers of a controlled transition.
- Green finance.
- Energy efficiency.
- Carbon taxation to control CO2 emissions.
- Footprint indicators.

## FUTURE SOLUTIONS TO DECARBONATE THE ENERGY MIX 1 day

Overview of renewable energies: solar, wind, hydraulic and marine energy, geothermal, hydrogen, biogas and biomass:

- Technical characteristics of the different energies, advantages and limitations.
- Evolution of production costs.
- New development trends.
- Innovations behind new modes of production and consumption.
- Associated environmental risks.
- Economic challenges - Competitiveness of renewables.

Problems of energy storage:

- Intermittent source management.
- Distributed generation systems.
- Network integration.
- Smart grids.
- Power to gas.

Stakes of the CO2 capture and storage sector.
The place of nuclear power in the energy transition.

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