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**

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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