Energy and Climate Change: Policy, Technology, and Action

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Barcelona (Spain)

UK Traininig
PARTNER



Energy and Climate Change: Policy, Technology, and Action

Ref: 20222462_199176 Location: Barcelona (Spain) Fees: 5900 GBP

Why This Course

Energy systems are at the center of the global climate challenge. The way energy is produced, distributed, and consumed directly affects greenhouse gas emissions, economic development, environmental sustainability, and long-term resilience. As governments, businesses, and communities move toward low-carbon futures, professionals need a clear understanding of climate science, energy technologies, policy frameworks, transition strategies, and adaptation planning.

This intensive 1-week Energy and Climate Change Training program equips participants with practical knowledge to understand the relationship between energy systems and climate change. The course covers climate science, emissions sources, renewable energy technologies, grid integration, climate and energy policies, decarbonization pathways, energy efficiency, just transition principles, climate risk assessment, and resilience planning. Through case studies and applied exercises, participants will learn how to support climate action, evaluate clean energy opportunities, and plan for more sustainable and resilient energy systems.

What You'll Learn and Practice

By joining this program, you will:

- Understand the fundamental science of climate change and its global impacts.
- Analyze current energy systems and their contribution to greenhouse gas emissions.
- Explore the energy-climate nexus and its key challenges and opportunities.
- Evaluate renewable energy technologies, including solar, wind, hydro, bioenergy, and geothermal.
- Understand energy storage, grid integration, and emerging clean energy technologies.
- Assess international, national, and subnational climate policy frameworks.
- Understand carbon pricing mechanisms and energy transition regulations.
- Develop low-carbon transition strategies for different sectors.
- Apply energy efficiency and demand management approaches.
- Address just transition and social equity considerations.
- Understand financing mechanisms for the energy transition.
- Conduct climate risk assessments and develop adaptation strategies for energy systems.



The Program Flow

Day 1: Climate Science and Energy Fundamentals

- Understand the core science behind climate change.
- Explore global energy systems and their role in economic and social development.
- Identify major greenhouse gas emissions sources.
- Analyze the relationship between energy production, consumption, and climate impacts.
- Identify key challenges and opportunities within the energy-climate transition.

Day 2: Renewable Energy Technologies and Integration

- Evaluate solar, wind, and hydroelectric power technologies.
- Explore bioenergy and geothermal energy systems.
- Understand the role of energy storage in supporting renewable energy adoption.
- Analyze grid integration challenges and solutions.
- Review emerging clean energy technologies and their potential contribution to climate mitigation.

Day 3: Climate and Energy Policy Frameworks

- Understand international climate agreements and negotiation processes.
- Analyze national and subnational climate policies.
- Explore carbon pricing mechanisms and their role in emissions reduction.
- Review energy transition policies, regulations, and incentives.
- Assess the effectiveness of different climate and energy policy approaches.

Day 4: Sustainable Energy Transition Strategies

- Develop decarbonization pathways for key sectors.
- Apply energy efficiency and demand management strategies.
- Understand the importance of just transition and social equity.
- Explore financing models and investment mechanisms for clean energy transition.
- Build practical strategies for moving toward low-carbon energy systems.

Day 5: Climate Adaptation and Resilience

- Apply climate risk assessment methodologies.
- Develop adaptation plans for energy systems and infrastructure.
- Understand climate-resilient infrastructure development.
- Use future scenarios to support long-term planning.
- Create practical approaches for strengthening resilience against climate-related disruptions.



Individual Impact

- Build confidence in understanding energy and climate change challenges.
- Strengthen knowledge of renewable energy technologies and clean energy transition options.
- Improve the ability to assess climate policies and regulatory frameworks.
- Gain practical skills in climate risk assessment and adaptation planning.
- Develop stronger strategic thinking for low-carbon and resilient energy systems.

Work Impact

- Support development of climate action and energy transition plans.
- Improve organizational readiness for renewable energy and decarbonization initiatives.
- Strengthen climate risk management and resilience planning.
- Enhance policy awareness and decision-making in energy and sustainability projects.
- Support more sustainable, efficient, and future-ready energy strategies.

Training Methodology

This program combines climate and energy concepts with practical application through:

- Case studies on energy transition and climate policy.
- Renewable energy technology assessment exercises.
- Climate policy and carbon pricing discussions.
- Decarbonization pathway and energy efficiency workshops.
- Climate risk assessment and adaptation planning activities.
- Scenario analysis and long-term resilience planning exercises.

Beyond the Course

Upon completion, participants will be able to:

- Develop comprehensive climate action plans for organizations.
- Assess renewable energy technologies and implementation opportunities.
- Navigate climate policy frameworks and energy transition regulations.
- Design low-carbon energy transition strategies.
- Conduct climate risk assessments for energy systems.
- Build adaptation and resilience strategies for long-term climate challenges.

