Sustainable Energy Technologies (SET) Program

This self-paced program is 126 learning hours.

What Will You Learn?

Learning Objectives

Energy Fundamentals Course

By the end of this course, learners will be able to:

1. **Describe** the structure and purpose of the Sustainable Energy Technologies (SET) Certificate program.
2. **Explain** the basic principles of electricity, including voltage, current, and resistance.
3. **Identify and compare** the major methods of electricity generation used in modern power systems.
4. **Explain** how electricity is transmitted and distributed from power plants to end users.
5. **Assess** the environmental impacts associated with electricity generation and energy use.
6. **Describe** the role of energy storage technologies in modern electricity systems and summarize key course concepts.

Wind Energy Developers Course

By the end of this course, learners will be able to:

1. **Explain** how wind functions as a renewable energy resource and how it is measured and evaluated.
2. **Describe** the key components and operating principles of wind turbines.
3. **Outline** the major steps involved in developing a wind farm project.
4. **Analyze** the economic considerations involved in wind energy development.
5. **Explain** the technical challenges and requirements for integrating wind power into the electricity grid.

6. **Apply** course concepts to evaluate or plan a wind energy development project.

Solar Energy Developers Course

By the end of this course, learners will be able to:

1. **Explain** solar energy as a renewable resource and how it can be harnessed for electricity generation.
2. **Describe** the basic technologies used in solar power systems.
3. **Outline** the steps required to plan and develop a solar energy project.
4. **Evaluate** the economic considerations associated with solar power development.
5. **Explain** the technical requirements for integrating solar power systems into existing electricity grids.
6. **Apply** course knowledge to analyze or design a solar energy project.

Who Should Take This Course?

This course is ideal for:

1. Energy and Utility Professionals

Individuals working in **electric utilities, energy companies, or grid operations** who want to strengthen their understanding of electricity systems, renewable energy integration, and energy storage.

2. Engineers and Technical Professionals

Electrical, mechanical, environmental, and energy engineers who want to expand their knowledge of **renewable energy technologies, power systems, and project development**.

3. Renewable Energy Project Developers

Professionals involved in **planning, financing, and developing renewable energy projects**, including wind and solar farms, who need to understand **technical, economic, and integration considerations**.

4. Sustainability and ESG Professionals

Individuals responsible for **corporate sustainability, ESG initiatives, and climate strategies** who need a stronger understanding of **how energy systems work and how renewable energy projects are developed**.

5. Government and Policy Professionals

Policy makers, regulators, and municipal planners working on **energy policy, climate action plans, and renewable energy initiatives**.

6. Environmental and Climate Professionals

Professionals focused on **climate change mitigation, environmental management, and clean energy transitions**.

7. Students and Early-Career Professionals

Students studying **energy systems, engineering, sustainability, environmental science, or climate policy** who want practical knowledge about renewable energy development.

8. Investors and Financial Professionals

Individuals working in **energy finance, infrastructure investment, or project financing** who need to understand the **economics and technical aspects of wind and solar energy projects**.

9. Construction and Infrastructure Professionals

Professionals involved in **project management, construction, and infrastructure development** for energy projects.

10. Anyone Interested in the Energy Transition

Individuals who want a strong foundational understanding of **how electricity systems work and how renewable energy projects are developed and integrated into the grid**.

In summary:
This program is ideal for **professionals, students, policymakers, and industry stakeholders who want to understand electricity systems and the development of renewable energy projects such as wind and solar as part of the global transition to cleaner energy.**

Recommended: Secondary school completion or equivalent, university-level English proficiency. 2–5 years of work experience is helpful but not mandatory

How Will You Benefit?

1. By gaining a Strong Understanding of Modern Energy Systems

Participants gain a clear understanding of how **electricity is generated, transmitted, distributed, and stored**, providing a solid foundation for working in today's evolving energy sector.

2. By gaining Knowledge of Renewable Energy Technologies

Learners develop practical knowledge of **wind and solar energy systems**, including how these technologies work and how they are integrated into the electricity grid.

3. By acquiring Skills to Support Renewable Energy Project Development

The program teaches how **wind and solar projects are planned, developed, and implemented**, including technical considerations, project planning, and economic factors.

4. By gaining a deeper Understanding of Energy Economics and Policy

Participants learn about the **financial and economic aspects of renewable energy**, helping them understand investment decisions, project feasibility, and the broader energy market.

5. By being Prepared for Careers in the Clean Energy Transition

The program helps prepare individuals for opportunities in the **rapidly growing renewable energy and sustainability sectors**, supporting careers in energy development, engineering, policy, sustainability, and project management.

In summary: The program equips learners with the **technical knowledge, strategic understanding, and practical insights needed to participate in the transition to a more sustainable and renewable energy future.**

Fees & Scheduling

Course Structure, Fees & Scheduling

- **Format**: 100% Online, Self-Paced
- **Duration**: Up to 6 months from your chosen start date
- **Modules**: Three practical and engaging courses (listed below)
- **Access**: Includes pre-recorded video lessons and email consultation with the instructor
- **Fee**: To be determined

Courses

Energy Fundamentals - This course is 42 learning hours.

Course Outline

- Module 1: Overview of Energy Fundamentals
- Module 2: Overview of Power Generation
- Module 3: Transmission and Distribution
- Module 4: Electricity and the Environment

Wind Energy Developers - This course is 42 learning hours

Course Outline

- Module 1: Wind Energy as a Resource & Wind Turbine Basics
- Module 2: Developing a Wind Farm
- Module 3: Estimating Wind Energy Production & Wind Economics
- Module 4: Application and Approval Process

Solar Energy Developers - This course is 42 learning hours

Course Outline

- Module 1: Solar Energy as a Resource
- Module 2: Developing a Solar Farm
- Module 3: Solar Economics
- Module 4: Solar Integration

For assistance or more information, please contact info@futureiqlearning.com

Why Take This Course?

1. To Understand How Electricity Systems Work

The program provides a strong foundation in **electricity generation, transmission, distribution, and storage**, helping learners understand how modern energy systems operate.

2. To Gain Knowledge of Renewable Energy Technologies

Participants learn how **wind and solar energy systems work**, including the science behind these technologies and how they are deployed in real-world energy projects.

3. To Support the Global Energy Transition

Many people take this program to better understand and contribute to the **transition toward cleaner, more sustainable energy sources** that reduce environmental impact and support climate goals.

4. To Develop Career Skills in the Energy Sector

The program helps individuals build knowledge that is valuable for careers in **renewable energy development, engineering, sustainability, energy policy, and project management**.

5. To Learn How Renewable Energy Projects Are Developed

Participants gain insight into the **technical, economic, and planning aspects of developing wind and solar energy projects**, from resource assessment to project implementation.

In summary:
People should take this program to **build practical knowledge about electricity systems and renewable energy technologies while preparing to participate in the growing clean energy economy.**