Integrating Renewable Energy and Green Technology Training Course



07 - 11 Dec 2026

Cape town

4600 € (Per Person)

Ref: #SUS9074_253320

Course Introduction / Overview:

This training course is designed to equip professionals with the strategic and technical skills needed to integrate renewable energy and green technology into their operations. The global shift toward a low-carbon economy is accelerating, creating both new opportunities and challenges for businesses and governments. This program, offered by BIG BEN Training Center, provides a framework for understanding key renewable energy sources, energy storage systems, and the smart grid technologies that are transforming the energy landscape. We will explore how to assess the feasibility of renewable energy projects, navigate policy and finance, and manage the transition to a more sustainable energy system. The curriculum is informed by the academic work of authors like Daniel Yergin, whose book The New Map: Energy, Climate, and the Clash of Nations provides a comprehensive overview of the geopolitical and economic forces shaping the future of energy. This course goes beyond a simple overview of different technologies to provide a deep understanding of how to implement real-world solutions that drive both financial and environmental benefits. We prepare participants to be leaders in the energy transition, able to make informed decisions that drive innovation and build a more resilient future.

Target Audience / This training course is suitable for:

- Energy managers and engineers.
- Operations and facility managers.
- Strategic planners and business developers.
- Sustainability and CSR professionals.
- Financial analysts.
- Public policy and government officials.
- Project managers.
- Government agencies and equivalents.

Target Sectors and Industries:

- Energy and utilities.
- Manufacturing.
- Technology.
- Real estate and construction.
- Transportation.
- Finance and investment.
- Government and public administration agencies.
- Consulting.

Target Organizations Departments:

- Operations.
- Engineering.
- Strategic planning.
- Sustainability.
- Research and development (R&D).
- Finance.
- Project management.
- Corporate social responsibility (CSR).

Course Offerings:

By the end of this course, the participants will have able to:

- Understand the principles of renewable energy technologies.
- Assess the feasibility of a solar or wind energy project.
- Integrate energy storage systems into a business model.
- Analyze the financial viability of green technology projects.
- Navigate government policies and incentives.
- Develop a strategic plan for energy transition.
- Measure and report on energy consumption and reduction.
- Communicate the benefits of renewable energy.

Course Methodology:

This training course uses a project-based and case-study driven methodology. The program is built on real-world examples of successful renewable energy projects and green technology implementations from around the globe. Participants will work in teams to develop a renewable energy plan for a specific organization, applying the tools and frameworks learned in the course. We will use interactive workshops to practice skills like financial modeling for solar projects and energy efficiency auditing. The curriculum is designed to be a collaborative experience where participants can share their unique challenges and innovative solutions. Our trainers, with extensive experience in the field, will provide direct feedback and guidance throughout the course. BIG BEN Training Center is committed to providing a dynamic and practical learning environment, ensuring that participants leave with the skills and confidence to lead effective energy transition initiatives.

Course Agenda (Course Units):

Unit One: Foundations of Renewable Energy

- The global energy landscape and the energy transition.
- Overview of solar, wind, and geothermal power.
- Hydroelectric and biomass energy systems.
- Energy storage technologies.
- The smart grid and its components.
- Economic and environmental benefits.
- Case studies of renewable energy projects.

Unit Two: Technology and System Integration

- Solar photovoltaic (PV) system design.
- Wind energy project development.
- Integrating renewable energy into existing infrastructure.
- Battery storage for grid resilience.
- Hybrid energy systems.
- The role of AI and machine learning.
- Optimizing energy consumption.

Unit Three: Policy, Finance, and Regulation

- Government policies and incentives.
- Carbon pricing and renewable energy credits.
- Project financing and investment models.
- Risk management for renewable energy projects.
- Power purchase agreements (PPAs).
- International agreements and national regulations.
- The role of financial institutions.

Unit Four: Project Management and Implementation

- Assessing project feasibility.
- Site selection and environmental impact.
- Project planning and execution.
- Procurement and supply chain management.
- Performance monitoring and verification.
- Maintenance and operations.
- Overcoming implementation barriers.

Unit Five: Strategic Planning and the Future of Energy

- Developing a corporate energy strategy.
- Aligning energy goals with business strategy.
- The future of the smart grid.
- Emerging technologies and innovations.
- Building a resilient energy system.
- Leadership in the energy transition.
- Career pathways in renewable energy.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can we accelerate the transition to renewable energy by moving beyond a focus on individual projects to fundamentally redesign our energy systems and infrastructure?

What unique qualities does this course offer compared to other courses?

This training course is unique because it provides a dedicated, strategic focus on the practical integration of renewable energy and green technology. While many programs cover general sustainability, our curriculum is designed to empower professionals with the specific skills needed to plan, finance, and manage renewable energy projects. The program is a hands-on experience, with exercises that directly simulate the challenges and decisions involved in a real-world energy transition. We go beyond theoretical concepts to provide a clear, actionable roadmap for balancing business needs with the imperative of a low-carbon future. This course is for professionals who want to lead their organizations toward a more sustainable, resilient, and profitable energy system.