

Planning for Energy and Sustainable Development

Responsible Energy Futures

Introduction

Through the use of global best practices in long-term energy portfolio planning, resource management, climate change mitigation techniques, environmental sustainability, and social impact, the public and commercial sectors will benefit from this Course N Carry training programme. The full energy planning cycle towards a sustainable future, which includes: imagining a sustainable energy future; resolving divergent (and frequently conflicting) stakeholder perspectives; weighing the advantages and disadvantages of different energy plan options; pitching those plans to decision-makers; identifying 80/20 common ground; and creating an energy implementation plan with defined tasks, accountable parties, and deadlines.

It will improve understanding of the different kinds of long-term planning and which ones are most effective for different communities. These range from the conventional utility-based Integrated Resource Planning (IRP) to the emerging IRRP that adds a "R" for Resilience to climate change pressures, to more grassroots plans that communities may adapt to meet various goals including carbon neutrality.

This will give the sustainable energy plans for the two main energy sectors—transportation and electricity—more specificity. These plans start with defining a baseline that describes the current energy scenario and work their way up to defining the means of achieving the community's desired "end-state," which is outlined in the previously established Vision, Goals, and Strategies.

Objectives

In addition to learning how to "see the big picture" of a sustainable energy future and "dot the i's" of detailed energy planning, the participants will gain practical knowledge on how to put together the pieces needed to assist a community in determining what sustainable development means to its members, how to access the right resources, determine what kind of sustainable energy plan would work best for their community, measure current scenarios, plot the course to make more desirable scenarios a reality in the near- to medium-term, and then design and implement a plan to bring that desired scenario to pass. And in the process, manage resources responsibly to leave future

generations with a better Earth.

Following this training session, the participants will be qualified to:

- Explain the relationship between sustainable energy and sustainable development, as stated in the Brundtland Report.
- Recognise that energy is a prerequisite for economic growth.
- Choose a diverse group of participants to create a sustainable energy strategy for the transportation and/or electrical industries.
- Gather and evaluate information from a variety of trustworthy sources, including those chosen stakeholders, in order to create a sustainable energy future that is both ambitious and attainable.
- Put in place a plan for sustainable energy.

Training Methodology

In-depth instruction on the subject will be provided to training participants, who will also benefit from a brief evaluation of their identities, roles, and interests. The training will be conducted using a variety of tried-and-true adult learning teaching and facilitation strategies. In addition, it includes case studies, films, interactive debates, interactive graphics, photos, charts, and references to other websites. The PowerPoint will emphasise informative graphics and be visually beautiful and captivating.

Organizational impacts

The company will gain from sending staff members to this training session since they will be able to apply the knowledge gained to create and execute a sustainable energy planning process, which will give the company a competitive advantage over rivals in the clean energy and sustainable development sectors as well as monetizable value.

The following knowledge and skill sets can be utilised by the organisation:

- The capacity to use the skills of their current workforce to prepare a more responsible energy future for their clients by applying the principles of sustainable development
- Taking stock of the knowledge and abilities required to organise the wise use of natural resources to produce the energy required to propel their communities' economic development
Gaining a deeper comprehension of the relationship between a community's wish to implement good change and the actions required to make that wish a reality through strategic planning
- Gaining understanding of the reasons for the acceptance or rejection of change by different stakeholders
- Understanding how renewable energy supplies are transformed into transportation, heat, cooling, and other energy services by energy producing methods
- The capacity to identify and go beyond any obstacles in the way of realising the goal and carrying out a sustainable energy plan

With the information and abilities they have acquired, the participants will be able to lead their organisation and further their careers by adding value in both an ethical and practical way.

This training programme will directly benefit the participants since it will enable them to:

- Utilise your personal experience with sustainable development to generate, distribute, and use energy in a responsible manner.
- Plan for sustainable energy in their communities by taking into account factors such as political realities, attitudes towards change, drivers of change, a shared vision and goals based on consensus, the amount of local energy resources available, and other planning aspects covered in the training course.
- Expand your knowledge of the policy, regulatory, technical, economic, market, environmental, and social aspects of planning and implementing sustainable energy.
- Make the connections between the broad idea of sustainable development and the specifics required to create an energy-responsible plan that will be in place for several years or perhaps decades.
- Expand their knowledge base to aid in making decisions about potential career paths or new areas of focus.

Who should attend?

For stakeholders in the public, private, non-profit, and international development sectors who are in charge of long-term energy portfolio planning, resource management, strategies for mitigating climate change, environmental sustainability, social impact, and economic development, this training programme is excellent.

Professionals in many different fields that work with sustainable development and clean energy will benefit immensely from this training, but in particular:

- Planners for the City
- Officials from national and subnational Ministries and Agencies of Energy
- Planning officials from national and subnational ministries and agencies
- Ministry/Agency Resource Planning Officials at the national and subnational levels
- Officials in charge of economic development in national and subnational ministries and agencies
- Transport Officials from National and Subnational Ministries and Agencies
- Fleet Managers in Transportation
- Electricity Providers and Controllers
- Separate Standards Regional Transmission Operators and Operators
- Managers of Campus Facilities
- Energy Managers for Defence Installations
- Experts in Mitigating Climate Change
- Experts on Climate Change Adaptation
- Providers of Sustainable Energy and Fuel Products and Services

• Organisations that are non-governmental

- Organisations for International Development

Course Outline

Day 1

Thinking About a Sustainable Energy Future with Stakeholder Involvement and Sector Scoping

- Politics Sensitivities of Players
- Schedules
- Including Stakeholders in the Plan's Design and Execution
- Choosing Appropriate Partners
- Visualising the Ideal Final State
- Establishing the Baseline
- Outlining Objectives and Approaches
- Motivating Consensus
- Putting the Plan into Practice
- What Is Sustainable Development?
- The Brundtland Report
- Depletion of Resources
- Impact on the Environment
- Equity Across Generations
- Considering Cradle-to-Cradle Design
- Finding the Causes of Change
- Effects on the environment
- Economic and Social Carbon In differentness
- Accepting the Fundamentals
- Principles grounded in science
- Thermodynamic Laws
- Courtesy
- Encouraging buy-in Recognising Dissension Balancing Divergent Opinions
- Social Justice
- Growth of the Economy
- Cost-effectiveness (highest value vs. least cost, for example)

Day 2

Sustainable Energy Planning Types

- Planning for Sustainable Energy from Various Viewpoints Sectoral
- Changes in Climate

- Equity Across Generations
- GESI Types of Economic Plans
- Planning using Integrated Resources
- Planning for Integrated Resources and Resilience
- Extended-Term Scheduling
- Vitality Planning for Sustainability
- Blends
- Ecological Power Technologies & Resources
- Reduction of Demand
- Wind, Sun, Water, and Biomass
- Hydrogen
- Natural Gas
- Resources & Technologies for Sustainable Transportation
- Reduction of Demand
- Debate: Food vs. Fuel
- Electricity from Biodiesel and Ethanol

Day 3

Organising for a Future with More Sustainable Electricity

- Choosing the Baseline Population and Taking Other Demographic Factors Into Account
- Evaluation of Load
- Technical Viability
- Financial Viability
- Facilitating Policy-Gap Evaluation
- Costs and Benefits
- Making a Plan to Reach Your Objectives
- Reducing the Need for Electricity
- Electricity in One Place
- Dispersed Power

Day 4

Establishing the Baseline for Immigration, Population, and Other Demographic Factors in the Planning of a More Sustainable Transportation Future

- Evaluation of Load
- Technical Viability
- Financial Viability
- Facilitating Policy-Gap Evaluation
- Benefits and Costs
- Making a Plan to Reach Your Objectives
- WFH Efficiency Standards and COVID

- Using public transport to share rides
- Demand Management Plan for Integrated Ground Transportation
- Use of Electric Vehicles with Renewable Fuels

Day 5

Putting the Sustainable Energy Plan into Practice: Plan Overview

- Who chooses the components of the plan?
- Who is in charge of bringing this about?
- How do we persuade the appropriate parties to accept this?
- Who foots the bill?
- Will legislation be needed to implement the plan?
- How is this going to occur?
- In what time frame is this possible to occur?
- Plan Suggestions Fundamentals
- Resilient Energy Execution of the Plan Group Public-Private Collaborations Models
- Monitoring Development