



an  egis company

بروجاكس للتدريب والتطوير
Projacs Training and Development

Renewable Energy Development Strategy

استراتيجية تطوير الطاقة المتجددة

24 – 28 January 2021

Dubai/ United Arab Emirates



Introduction

Renewable energy heating and cooling (REHC) has been described as the “sleeping giant” of renewable energy potentials from the global perspective. Mature REHC technologies using solar, biomass and geothermal resources are currently available as cost-effective means of reducing both carbon dioxide emissions and fossil fuel dependency under many circumstances. Other technologies are close to mass-market deployment. Governments, including those endeavoring to meet challenging greenhouse gas (GHG) emission reduction targets, could find that considerable mitigation potential exists through the displacement of fossil fuels, usually, but not always, at relatively low costs per tone of CO₂ emission avoidance.

Objectives

In regions with favorable resources and market conditions, several mature solar thermal, biomass and geothermal heating technologies entered the mass market many years ago since they were cost competitive with electricity, oil and gas. Other technologies are near-market and yet more are under development, including solar cooling technologies. REHC systems at the small domestic scale (solar water heaters, solid-fuel stoves and geothermal heat pumps) are distributed and more flexible in terms of being able to utilize the local renewable energy resources available than at the larger industrial scale of heating demand.

Who Should Attend?

Engineers, Technicians and technical energy planners who would like to expand their knowledge.

Course Outline

Day One

1-Introduction to Renewable Energy Heating and Cooling

- What is Renewable Heating?

- What is Renewable Cooling?
- Products and services
- Merit order of REHC options
- Heating
- Cooling

Day 2

- 2-REHC Technologies
- Solar-thermal
- Active heating
- Concentrating solar heating systems
- Active solar cooling
- Passive solar heating and cooling
- Bio-energy technologies
- Conversion technologies

Day 3

- Biomass fuel types and prices
- Emissions
- Geothermal technologies
- Deep geothermal
- Enhanced geothermal systems
- Shallow geothermal

Day 4

- Applications and competitiveness
- Industry and commercial buildings
- Maturity
- Mass market
- Early market
- Under development
- Research needs and priorities
- RD&D for solar thermal technologies
- RD&D for biomass and bio-energy technologies

Day 5

- RD&D for geothermal technologies
- RD&D for cooling
- RD&D for storage technologies

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- | | |
|---------------------|------------------|
| • Technical Session | 08.30-10.00 am |
| • Coffee Break | 10.00-10.15 am |
| • Technical Session | 10.15-12.15 noon |
| • Coffee Break | 12.15-12.45 pm |
| • Technical Session | 12.45-02.30 pm |
| • Course Ends | 02.30 pm |

Course Fees*

- **2,950USD**

**VAT is Excluded If Applicable*