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بروجاكس للتدريب والتطوير
Projacs Training and Development

Wind Energy Utilization

الاستخدام الأمثل لطاقة الرياح

06 – 10 September 2020

Dubai / United Arab Emirates

A Member of:



PROJACS ACADEMY



ProjacsAcademy.com



Introduction

This course for “Wind Energy” provides a practical overview of the Environment aspects for the energy generation. It presents Wind Energy as an environment friendly energy source and the importance to apply and its standards, process, requirements.

The Burning of fossil, such as coal, oil and natural gas for generating electricity will release greenhouse gases and other pollutants into the atmosphere and will impact the earth and mankind. The renewable energy is ready to be harnesses, inexhaustible, and more importantly as it is a clean alternative to fossil fuels.

Many countries already switched to renewable energy. Apart from looking for clean sources from the environmental point of view, the search for new sources as substitutes for fossil fuels is another reason providing such drive.

Environmental Design is the discipline of producing the spaces of our surroundings. The comprehensive program encompasses of courses in architecture, landscape architecture, and urban design.

Objectives

Upon successful completion of this training program, the participants will learn the following:

- The basic elements of wind energy Systems
- Voltage and Load Characteristics of wind energy Systems
- Different types of wind farms
- Site selection of wind energy farms
- Controllers of wind energy systems
- Protection schemes of wind energy

Who Should Attend?

This course is designed for those who want to learn about the wind energy systems. They include engineers, developers, facility managers, systems engineering consultants and architectural technologist, business managers, and architects. Individuals considering a consultancy job and/or those who have to evaluate the benefits of adopting wind energy technology.

Course Outline

Day One:

- Introduction
- Sources of Energy
- How is our present energy use making unfriendly impacts on the Environment.
- What is Renewable Energy
- Why use Renewable Energy
- Renewable Energy Sources
- Social and Economic factors

Day Two:

- Site factors that affect the selection
- Wind Power Systems
- Historical Development of Wind Power
- Types of Wind Turbines
- Power in the Wind
- Impact of Tower Height

Day Three:

- Maximum Rotor Efficiency
- Wind Turbine Generators
- Synchronous Generators
- The Asynchronous Induction Generator
- Speed Control for Maximum Power

Day Four:

- Importance of Variable Rotor Speeds
- Pole-Changing Induction Generators
- Multiple Gearboxes
- Variable-Slip Induction Generators
- Wind Farms
- Wind Turbine Economics

Day Five:

- Key issues and options
- Strategy for Wind Energy
- Social and environmental costs and benefits
- Financial Evaluation of Wind Energy Projects
- Case Study

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*