



ITEC

3rd International Online Training Course on
Wind and Solar Resource Assessment

10th - 21st October 2022

Organized by



नीचे NIWE

NATIONAL INSTITUTE OF WIND ENERGY

An Autonomous R&D Institution, Ministry of New and Renewable Energy, Government of India
CHENNAI

Sponsored by



MINISTRY OF EXTERNAL AFFAIRS

Government of India
NEW DELHI

Introduction

Renewable Energy, particularly, Wind and Solar has gained momentum and developing fast in the country as the entire world is in the race of reducing carbon emission. The wind and solar energy has proved a highly successful energy option with global installation of over 894 GW and 849 GW respectively by the end 2021. As of March 2022, India had 156 GW of renewable energy installed capacity including large hydro and represents 39% of the overall energy installed capacity of the country. Wind power contributes 40358 MW and solar power contribution 55338 MW and stands fourth and fifth in the world respectively. Further, Hon'ble Prime Minister of India has committed at the recently concluded United Nations COP26 Climate Change meet held in Glasgow, UK that India is targeting about 500 GW of clean energy by 2030 and would achieve net-zero carbon emission by 2070. To achieve the target and to meet the energy demands, the resource assessment is the first and foremost activity to be taken care before the development of wind and solar power projects.

National Institute of Wind Energy (NIWE) formerly known as Centre for Wind Energy Technology (C-WET) was established at Chennai in 1998 by Ministry of New and Renewable Energy (MNRE) to cater to all scientific and technological needs of the vibrant and wind based renewable energy sector. One of the Charters of this institute is to provide training and empower scientists and technologists with right kind of knowledge base. The Ministry and NIWE recognize this as a most important grass root activity that has to be undertaken. NIWE has very good experience and expertise in Wind Resource Assessment activities and has established about 900 Wind Monitoring Stations all over the country and published Indian Wind Atlas. NIWE has also established world's largest solar radiation monitoring network, spread in 125 locations across India. With this vast experience, we have an obligation to disseminate the knowledge learnt to foster growth of wind and solar energy across globe. NIWE has so far trained more than 2800 professionals from 99 countries by conducting 48 national and 40 international training courses. In this context, a ten days Online International Training Course is scheduled by NIWE under e-ITEC programme sponsored by Ministry of External Affairs (MEA), Government of India.

Objectives

- ◆ The prime objective is to transfer knowledge and special skills to the international participants on wind and solar resource assessments.
- ◆ To build skilled human resource so that there will be advancement of wind and solar energy in the participating country.
- ◆ To provide an invaluable platform for exchange of professional experiences among diverse participants.
- ◆ To leverage the research that continues to shape this rapidly evolving disciplines.

Resource Persons

The resource persons for this training course will be NIWE engineers, industry professionals, academicians and other national experts who have significantly contributed for wind and solar energy development in the country.

Training Methodology

- (a) Online lectures and case studies to stimulate active participation and dialogue.
- (b) Assessment tests will conduct to enhance effective transfer of knowledge.

Course Syllabus

The course content for the training has been carefully thought out syllabus with specific subject experts giving lectures and going through specific case studies such that, at the end of the course considerable useful knowledge transfer is perceived.

The course will address the following aspects:

- ◆ Introduction to Wind and Solar Energy with Global Energy Scenario
- ◆ Wind and Solar Resource Assessment and its Techniques
- ◆ Site Selection for Wind and Solar Monitoring Stations
- ◆ Wind and Solar Measurements
- ◆ Installation, Instrumentation and Commissioning of Wind and Solar Monitoring Stations
- ◆ Wind and Solar Data Collection, Processing, Validation, Analysis and Reporting
- ◆ Design and Layout of Wind Farms
- ◆ Solar Site Assessment and Planning
- ◆ Wind and Solar Resource Mapping & Atlas
- ◆ Forecasting of Renewable Energy Production
- ◆ Renewable Energy Schemes and Policies

The Programme

The course duration will be 10 days **from 10th to 21st October 2022.**

Target Participants

The course will be useful for anyone involved in wind and solar energy or those who are looking for an introduction. Persons from the following fields will find this course very relevant.

- ◆ Academic and R & D Institutions
- ◆ Power Industry
- ◆ Manufacturers
- ◆ Suppliers and Distributors
- ◆ Utilities
- ◆ Consultants
- ◆ Project Developers
- ◆ Government Organization
- ◆ NGOs and Green Engineers

Course Fee

There is **NO COURSE FEE** and is fully funded by Ministry of External Affairs (MEA), Government of India under e-ITEC programme.

Eligibility

- ◆ Applicants should be from any one of the ITEC countries. List of ITEC countries can be found in www.itecgoi.in
- ◆ **Diploma or Degree** in any **Science or Engineering streams** with good knowledge in English.
- ◆ Age should be between **25 to 45 years**.

Venue

The venue for the programme will be the online platform through video conferencing facility [Microsoft Teams (MS Teams)].

Reason to Attend

The online programme will offer a good foundation on the principles of engineering behind Wind and Solar Energy and its Resource Assessment. The course would give a picture of complete know-how and pave the way to go about setting up financially viable wind and solar power projects. Participants after attending the programme will have the complete overview about wind and solar technology and its proper resource assessment. This online course will boost the participant's interest working towards wind and solar energy sector and will create the required skilled / trained man power for fostering the growth of wind and solar power sector.

How to Apply?

1. Those who are interested to apply for this Training Course are required to visit the website www.itecgoi.in.
2. Click on the E-ITEC/ITEC ONSITE, choose 'Apply Now' for filling up the online application form. It will take you to the streams to be chosen where you have to choose 'Environment and Climate Change' and then select 'National Institute of Wind Energy'.
3. It will take you to the institute page where you have to click on the 'apply' link provided in 3rd International Online Training Course on Wind and Solar Resource Assessment and follow the instructions.
4. Or simply type the URL (<https://bit.ly/3yQpIxp>) on browser, it will take you directly to the 'Apply link' page.

Course Coordinator

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ABOUT NIWE

National Institute of Wind Energy formerly Centre for Wind Energy Technology shortly known as NIWE is an autonomous R&D institution established in 1998 at Chennai by the Ministry of New and Renewable Energy (MNRE), Government of India. It is a premier institution with highly experienced professionals having expertise in all related disciplines of wind energy sector. NIWE is a forward looking and practical institution always well placed to take the next logical steps towards advancing wind technology in the right direction. With its progressive approach to all wind energy related science and technology from onshore to offshore, NIWE assures assistance from resource assessment (both wind and solar, RE forecasting for Energy production) to project implementation. As an integral part of NIWE, a world class accredited Services providing Wind Turbine Test Station (WTTS) is established at Kayathar, Tamil Nadu. Perhaps, NIWE is the only Testing and Certifying agency in the country.

NIWE has been vested with the responsibility to provide complete scientific and technical backing to all stakeholders in the field of wind energy and has stated its commitment through its quality policy.

QUALITY POLICY

NIWE is committed to achieve customer satisfaction, loyalty and confidence by providing credible, prompt and complete solutions of international quality to all the stakeholders in the wind energy sector.

NIWE, strives to be technical focal point of excellence for the present and future. NIWE shall stay at the forefront of Wind Turbine Technology application by continuously improving its expertise.



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