

24th National Training Course on **Wind Resource Assessment**

10th to 14th February 2020



नीवे NIWE

NATIONAL INSTITUTE OF WIND ENERGY

An Autonomous Research and Development Institution
Ministry of New and Renewable Energy, Government of India
Chennai

Renewable Energy in particular Wind has become mainstay in meeting energy needs having achieved grid parity in term of costs as well as technical requirement. The wind energy has proved a highly successful energy option with installation of over 591 GW worldwide and 37 GW in India by end of 2019. It is estimated that viable wind power potential in India is more than 300 GW at 100 m height and only about 10 % of the potential is exploited till now. Lack of skilled human resource has been one of the main barriers that hinders wind and other renewable energy diffusion.

The National Institute of Wind Energy (NIWE), under the Ministry of New and Renewable Energy, Government of India has pioneered in promoting Wind Energy and has contributed for promotion of wind energy as one of the primary energy sources in India. Decades of concerted efforts have started to yield gratifying results today, wind power contributes about 10.6% (37278.68 MW) of the total Indian energy mix of 365980.54 MW and stands fourth in terms of installed wind power capacity worldwide as on November 2019. Today, India is a major player in the global wind energy market with a sustainable annual growth rate. The key factors responsible for this phenomenal success were the policy support from the Central, especially by the Ministry of New and Renewable Energy (MNRE) and the technical support extended by the Centre for Wind Energy Technology (C-WET), now National Institute of Wind Energy (NIWE). NIWE has already successfully conducted 31 national and 38 international training courses, trained about 1386 national professionals and 826 international professionals from 96 countries. NIWE has very good experience and expertise in Wind Resource Assessment activities and has established about 850 Wind Monitoring Stations all over the country and published Wind Atlas for India. With this vast experience, we have an obligation to disseminate the knowledge learnt to foster growth of wind energy across globe. In this connection, we introduce 5 days National level training course is proposed to address all aspects of Wind Resource Assessment in a focussed manner with practical sessions on the sensors equipments used for the study.

METHODOLOGY & COURSE OUTLINE

The lectures often include exercises and case studies to stimulate active participation and dialogue. This training course is intended to cover a wide variety of key topic such as

- Wind Energy Technology
- Introduction to Wind Resource Assessment
- Wind Resource Assessment techniques
- Site Selection for Wind Monitoring Stations (WMS)
- Installation, Instrumentation and Commissioning of WMS
- Wind Resource Mapping & Atlas
- Met Mast and Modern Measurement Techniques including measurement using remote sensing instruments (SODAR & LiDAR)
- Data Analytics and Processing
- Software tools for Wind data Analysis
- Design and Layout of wind farm
- Forecasting and Wind Energy Production

COURSE OBJECTIVES

The objective of the training course is to transfer knowledge and special skills to the wind energy personnel active in technical and operational fields as well as those who are looking for entry in wind energy sector. The idea is to provide specialised training and knowledge to industry, utilities, project developers, investors, consulting firms, technical and academic institutions, students, bankers and various Central and State governmental implementing agencies. Moreover, the course will provide an invaluable platform for dialogue and open exchange of views and experiences.

TARGET PARTICIPANTS

The targeted participation strength would be around 30. The course will be useful for anyone who is involved in wind energy field and those who are looking for an introduction. Persons in the following areas will find this course very relevant

- Academic and R&D Institutions
- Wind Turbine Manufacturing Companies
- Project Developers and Investors
- Consulting Firms
- Non-Governmental Organizations (NGO)
- State Nodal Agencies (SNAs)
- Suppliers and Distributors
- Independent Power Producers (IPP)
- Financial & Insurance Institutions
- Government Organizations

THE PROGRAMME & SCHEDULE

The duration of the Course is 5 days encompassing presentations, detailed lectures with case studies, success stories along with practical exposure and visits to laboratories. The dates for the Course is from 10th to 14th February 2020.

RESOURCE PERSONS

The resource persons for the training course would be scientists / engineers of NIWE, Industry experts, engineers, scientists and academicians, who have contributed significantly for the developments of energy, renewable energy and wind energy in particular.

REASONS TO ATTEND

The course will offer a good foundation on the principles of engineering behind wind resource assessment. It would also outline the Government policies and wind energy scenario in India. It would facilitate an invaluable platform for dialogue and open exchange of views and sharing experience among participants with experts in the field. It would give a picture of the know-how and pave the way to go about setting up a financially viable wind farm project.

CANCELLATION & SUBSTITUTIONS

We take utmost care in providing quality lectures and hospitality with appropriate advanced planning. The course structure & organization of training has been highly acclaimed by all the previous course participants. The registration without the Course Fee on or before the due date does not confirm the reservation for the course. Cancellation of registration will be entertained until 05.02.2020 only with a written request. The refund of Course Fee will be done after deducting handling charges of Rs. 1000/-. The cancellation request received after 05.02.2020 will not be eligible for refund and instead, a course kit will be provided after the course. Substitution can be allowed with prior intimation and submission of new Registration Form. In case the training is cancelled, full refund will be made. NIWE reserves all rights to postpone or cancel the course with due intimation to all concerned.

VENUE

The venue for the programme would be the Conference Hall of National Institute of Wind Energy, Chennai.

COURSE FEE

This is a **non-residential** training course. The Course Fee is Rs. 5,900/- (Rs.5,000/- plus 18% GST Rs.900/-) for student, Rs. 8,260/- (Rs.7,000/- plus 18% GST Rs.1,260/-) for faculties and Rs. 11,800/- (Rs.10,000/- plus GST of 18% Rs.1,800/-) for industrialists. There is no course fee for the officials of State Nodal Agencies. Students and faculties need to provide a supporting letter from the Head of the Institution / Department along with Bonafide Certificate and valid ID card. The Course Fee includes Course Material, lunch, refreshments and excludes accommodation. The Course Fee must be paid by **Demand Draft** drawn in favour of the “**National Institute of Wind Energy**” payable at Chennai or the details for payment through electronic media is also made available in NIWE website (http://niwe.res.in/assets/Docu/RTGS_document.pdf).

REGISTRATION

The enclosed Registration Form filled in all respects may be sent to the Course Coordinator on or before 05/02/2020 along with the Course Fee. Due to limited number of seats, acceptance of nominations will be on the “First-come, First Served” basis subject to the receipt of full Course Fee of Rs.5,900/- or Rs. 8,260/- or Rs.11,800/- including GST of 18%.

COURSE COORDINATOR

Dr. P. KANAGAVEL

Director and Head

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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 at Chennai in 1998 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. This combination makes it a forward looking and practical institution that will take the next logical steps towards advancing wind technology in the right direction. With its open approach to all wind energy related science and technology, NIWE assures assistance from resource assessment to project implementation. As an integral part of NIWE, a world class Wind Turbine Test Station (WTTS) is established at Kayathar in Thoothukudi District, Tamil Nadu. Perhaps, NIWE is the only Testing and Certifying agency in the country.

NIWE has 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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