18th National Training Course on

WIND ENERGY TECHNOLOGY

26th to 30th October 2015

NATIONAL INSTITUTE OF WIND ENERGY

An Autonomous Research & Development Institution under the
Ministry of New and Renewable Energy, Government of India

Chennai

The renewable energy arena, 'Wind Energy' showed its remarkable growth in the past two decades, that can create pollution free and environment friendly atmosphere. India, over the years, has been a trend-setting nation with regard to Wind Power utilization and decades of concerted efforts have started to yield gratifying results. The Indian Wind Energy programme has been very successful in commercializing wind energy and India stands 5th in the World in terms of installed wind power capacity with 23444 MW as on March 2015, contributes to around 65.5% of the grid-connected renewable energy power of the country. The wind energy market is continuing to grow steadily in India along with the rest of the world. India is now one of the global manufacturing hubs for wind turbines with more than 20 large wind turbine manufacturers producing capacity ranging from 225 kW to 2500 kW and several small wind turbine manufacturers producing capacity ranging from 300 W to 50 kW.

Indian Wind Industry faces serious shortage of skilled man power to meet the huge demand of this booming industry. Completely Indigenous and low-cost wind turbine design remains a challenge due to non availability of skilled human resource and research infrastructure. To assure timely evolution of wind industry and to meet India's demands, development of rural areas and human resource development is a matter of immense interest. NIWE is continuously addressing these issues by organizing national & international training programmes since 2004 to produce quality human resource for Wind Industry. Till now, about 1000 national and 350 international participants were trained by NIWE through its 18 national and 17 international training courses including special training courses. All the training programmes have been well received by the participants and appreciated for its wide coverage of interdisciplinary syllabus, quality of lectures and hospitality. With this vast experience and its pre-eminent position, NIWE has all the knowledge and facility to undertake such an important task. With this background, we are happy to announce the 18th National Training Course on "Wind Energy Technology" to provide complete overview about wind energy technology.

COURSE OBJECTIVES

The objectives of the training course are:

- *To transfer knowledge and needed special skills to the wind energy personnel, active in technical and operational fields.*
- *To build personnel to meet the huge demand of skilled human resource in India, and specifically to enable extensive research and evolve innovative strategies.*
- *To provide an invaluable platform for exchange of professional and cultural experience among diverse participants from all parts of the country.*
- *At the end of this course, participants will have strong understanding on fundamentals of wind energy technology along with applications, standards, certification, economics & policies and leverage on the research that continues to shape this rapidly evolving discipline.*

METHODOLOGY & COURSE OUTLINE

The course content for the training is a carefully thoughtout syllabus with specific subject experts giving lectures and class room exercises. The course is designed to address all aspects of wind power harnessing starting from wind resources assessment to project implementation and operations & maintenance in a focussed manner. The five days course gives an overview, covering the following multi-disciplinary topics

- Wind energy conversion technology and power generation
- Wind resources assessment and techniques
- Planning, including design of wind farms
- Wind turbine components and performance characteristics
- Installation and commissioning of wind farms
- Post installation activities - Grid Integration
- O & M aspects of wind farms
- Testing and Certification of wind turbine
- Small wind turbine and Hybrid systems
- Wind energy developments in India
- Indian Government policies and schemes
- Cost benefit analysis of wind energy projects

THE PROGRAMME

The course duration is five days from **26th to 30th October 2015** encompassing presentations, lectures with case studies, success stories and exercises. The training course timing will be from **09.00 am to 06.00 pm.**

TARGET PARTICIPANTS

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

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.6,840/- including Service Tax per student (regular) participant and Rs.22,800/- including Service Tax for other than student participant. Students need to provide a supporting letter from the Head of the Institution / Department along with Bonafide Certificate and valid ID card. The Course Fee must be paid by Demand Draft drawn in favour of the "National Institute of Wind Energy" payable at Chennai. The details for payment through electronic media is made available in NIWE website (http://niwe.res.in/assets/Docu/RTGS_document.pdf). The Course Fee includes Course Material, lunch & refreshments and excludes accommodation.

REGISTRATION

The enclosed Registration Form filled in all respects may be sent to NIWE on or before the **15/10/2015** 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 receipt of full Course Fee of **Rs.6,840/- or Rs.22,800/-** including Service Tax.

RESOURCE PERSONNEL

The resource persons for this training course would be the scientists / engineers of NIWE and national experts from academic institutions, wind turbine manufacturers, developers, utilities and consultants who have contributed significantly for the development in the fields 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 energy technology and power generation & distribution along with financial viability and entrepreneur opportunities. 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. In order to plan in advance, the registration without the Course Fee on or before the last date does not confirm the reservation for the course. Cancellation of registration will be entertained until 15.10.2015 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 15.10.2015 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.

COURSE COORDINATOR

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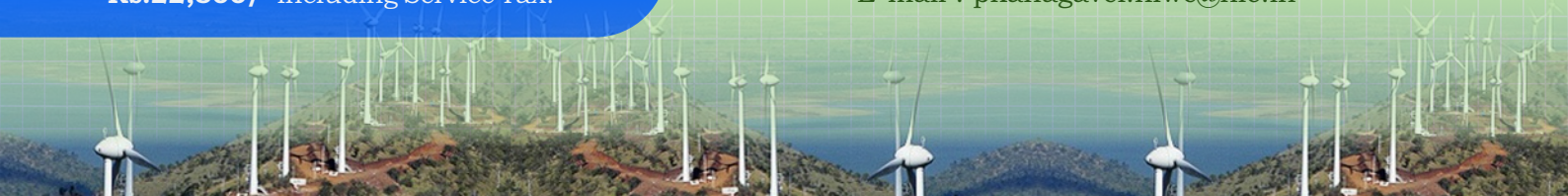

ABOUT NIWE

National Institute of Wind Energy formerly Centre for Wind Energy Technology shortly known as NIWE is an autonomous R&D institution established at Chennai in 1998 by the Ministry of New and Renewable Energy (MNRE), Government of India. It is a young organization with highly experienced professionals with expertise in all related disciplines of wind energy sector. This unique combination makes it a forward looking and practical organization 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.

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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