

15th National Training Course on

WIND ENERGY TECHNOLOGY

27th - 29th November 2013



CENTRE FOR WIND ENERGY TECHNOLOGY

An Autonomous Research and Development Institution
Ministry of New and Renewable Energy, Government of India
CHENNAI - 600 100



The renewable energy sources, particularly 'Wind Energy' development, showed its remarkable growth in the recent years, that can create pollution less and environment friendly atmosphere. India, over the years, has been a trend-setting nation with regard to Wind Power Utilization and decades of concentrated 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 of 18421 MW as on February 2013, contributes to around 75% of the grid-connected renewable energy power in 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 about 23 large wind turbine manufacturers, 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 deficit of skilled man power to meet the huge demand of this booming industry. Completely Indigenous and low-cost wind turbine design remains as a challenge due to nonavailability of human resource and research infrastructure. To assure timely evolution of wind industry and to meet India's demands and development of rural areas, human resource development is a matter of immense interest. C-WET 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 150 international participants were trained by C-WET through its thirteen national and ten international training courses including special training courses. All the trainings have been well received by the participants and appreciated for wide coverage of interdisciplinary syllabus & quality of lectures and hospitality. With this vast experience and its pre-eminent position, C-WET has all the knowledge and facility to undertake such an important task.

With this background, we are happy to announce the 15th National Training Course on "Wind Energy Technology" to address all aspects of Wind Resource Assessment, Wind Turbine Testing, Standards & Certification and Operation Maintenance of Wind Electric Generators (WEGs) in a focused manner. This short course offers a unique opportunity to learn about fundamentals of wind turbine technology.

COURSE OBJECTIVES

The objectives of the training course is to:

- transfer knowledge and needed special skills to the wind energy personnel, active in technical and operational fields. The idea is to provide specialized training and knowledge to industry, utilities, technical institutions and various Central and State governmental implementing agencies.
- build personnel to meet the huge demand of skilled human resource in India, and specifically to do extensive research and evolve innovative strategies.
- disseminate knowledge and develop special skills using lectures from scientists and leading professionals in the wind energy sector, interactive sessions with the leading personnel in the Wind Energy field and learning materials.
- provide an invaluable platform for exchange of professional and cultural experiences 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, CDM & policies and leverage on the research that continues to shape this rapidly evolving discipline.

THE PROGRAMME

The total course duration is three days from **27th to 29th November 2013** encompassing presentations, lectures with case studies, success stories and exercises. The training course timing will be from **09.00 am to 06.00 pm**.

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 the aspects of wind power harnessing starting from wind resources assessment to project implementation and operations & maintenance in a focussed manner. The three 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
- Design aspects of wind turbine
- 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
- Indian Government policies and schemes
- Wind energy developments in India
- Cost benefit analysis of wind energy projects
- CDM related to wind energy development

RESOURCE PERSONNEL

The resource persons for this training course would be scientists / engineers of C-WET, national experts, engineers, scientists and academicians, who have contributed significantly for the developments towards the field of energy, renewable energy and wind energy in particular.

TARGETED PARTICIPANTS

The course will be useful for anyone involved in wind energy industry or those looking for an introduction. Persons in the following areas will find this course very relevant

- Academic Institutions
- 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 Centre for Wind Energy Technology**, Chennai.

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 experiences with scientists / professionals across the country. It would give a picture of the know-how and pave the way to go about setting up a financially viable wind farm project.

COURSE FEE

This is a non-residential training course. The course fee is **Rs.15,000/-** plus Service Tax of **12.36%** per participant and **Rs. 5,000/-** plus Service Tax of **12.36%** for students.



Students need to provide the supporting letter from the Head of the Institution / Department along with Bonafide Certificate. The Course fee must be paid by **Demand Draft** drawn in favour of the **“Centre for Wind Energy Technology” payable at Chennai** & the details for payment of Government transaction through electronic media is made available in C-WET website (http://cwet.res.in/web/Docu/RTGS_document.pdf). The course fee includes Course Material, lunch & refreshments and excludes the accommodation.

REGISTRATION

The enclosed registration form should be filled in all aspects and reach C-WET on or before the **15/11/2013** along with the course fee. Due to limited seats, acceptance of nominations will be on the “First-come, First Served” basis subject to receipt of full course fee of **Rs.16,854/-** or **Rs. 5,618/-** including Service Tax of **12.36%**.

CANCELLATION & SUBSTITUTIONS

We take more care in providing quality lectures and hospitality with appropriate advance planning and the course structure & organization of training was highly appreciated by all the previous course participants. In order to plan in advance, the registration without the payment on or before the last date does not confirm the reservation for the course and the cancellation of registration will be entertained until 15.11.2013 only with the written request. The refund of the registration fee will be done after deducting the handling charges of Rs.1000/-. The cancellation request received after 15.11.2013 will not be eligible for refund and instead the course kit will be provided after the course but the substitution can be allowed with prior intimation and submission of new registration form. In case the training is cancelled, full refund will be made. C-WET reserves all rights to postpone or cancel the course with due intimation.

COURSE COORDINATOR

P. KANAGAVEL

Scientist & Unit Chief i/c,
Information, Training and Commercial Services (ITCS)
Centre for Wind Energy Technology (C-WET)
Velachery - Tambaram Main Road, Pallikaranai
Chennai - 600 100, Tamilnadu
Phone : +91-44-2246 3982 / 2246 3983 / 2246 3984

+91-44-2246 3994 (D)

Mobile : +91-9445798007

Fax : +91-44-2246 3980

E-mail : training@cwet.res.in / pkanagavel@cwet.res.in

ABOUT C-WET

The Centre for Wind Energy Technology shortly known as C-WET 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, C-WET assures assistance from resource assessment to project implementation. As an integral part of C-WET, a world class Wind Turbine Test Station (WTTS) is established at Kayathar in Thoothukudi District, Tamil Nadu. Perhaps, C-WET is the only Testing and certifying agency in the country.

C-WET 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

C-WET 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.

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



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Phone: +91-44-2246 3982, 2246 3983, 2246 3984 Fax: +91-44-2246 3980

E-mail: info@cwet.res.in Web: <http://cwet.res.in> / <http://www.cwet.tn.nic.in>

