

Eighth National Training Course on **Wind Energy Technology**

9th to 11th December 2009

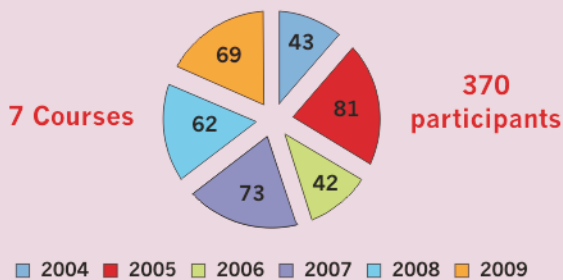


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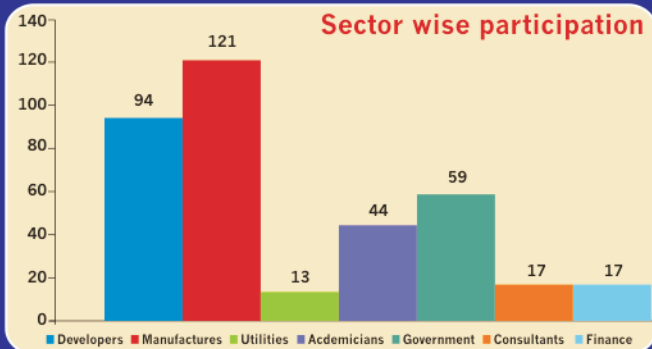
CENTRE FOR WIND ENERGY TECHNOLOGY

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

C-WET National Training Programme



Sector wise participation



Wind energy today ranks top amongst the commercially viable renewable sources of energy for electricity generation. Currently, wind turbines generate more than 1.5% of the global electricity demand. Wind energy is used in more than 70 countries and the worldwide wind energy installed capacity has reached 1,20,791 MW at the end of 2008, with about 20 to 30% annual growth rate and with a further expected increase. India holds fifth position with an installed capacity of 10,464 MW (as on July 2009). India's potential for power generation from wind energy has been assessed conservatively at 48,000 MW and is expected to increase considering the supportive governmental policies, greater land availability, more accurate resource assessment and larger turbines.

The wind energy market is continuing to grow steadily in India along with the rest of the world. In 2008, new additional wind generating capacity of 1,800 MW was installed, taking the cumulative figure upto 9.6 GW. This represents an annual growth of 22%. Wind turbine installations in India has been concentrated in a few regions, especially in the southern state of Tamil Nadu, which maintains its position as the state with the largest wind power installation, with 4,118 MW at the end of 2008, representing 44% of India's total installed capacity. Other states as well are seriously pursuing to reach the top slot. As a result, wind farms can be seen coming up all across the country in 8 to 10 States.

To meet the increasing demand for skilled manpower by the industry and to create awareness amongst the general public to sustain and expand the wind power installation in the country, C-WET has been organising national level training courses since 2004 and has successfully organized seven such courses. Till now, 370 participants from 15 States and 3 Union Territories across the country working in various sectors have benefited from the programmes.

C-WET with its pre-eminent position has the required knowledge pool and training facilities to undertake such an important task. In keeping with this endeavour, the Eighth National Training Course on “**Wind Energy Technology**” is being scheduled during the period from 9th to 11th December 2009.

OBJECTIVE

The objective of the training course is to transfer knowledge and to impart special skills to those engaged in promotion and facilitation of wind energy. The idea is to provide basic to advanced level of training to persons coming from the industry, utilities, technical institutions and various Central and State Nodal Agencies (SNA).

THE PROGRAMME

The total course duration would be three days and is scheduled during the period from **9th to 11th December 2009**, involving presentations, lectures with case studies and focused success stories. The course timing will be from **09.00 a.m. to 06.00 p.m.**

THE TRAINING

The course content for the training is a carefully thought out 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 resource assessment to project implementation and operations & maintenance in a focused manner. The 3 day course gives an overview covering the following multi-disciplinary topics:

- Wind energy conversion technology and power generation
- Assembly / design of wind turbine
- Performance characteristics of wind turbine components
- Control system engineering
- Wind turbine technology developments
- Feasibility study & technology assessment of wind farms
- Wind resources assessment and techniques
- Planning including design of wind farms
- Installation and commissioning of wind farms
- Post installation activities - grid integration
- O & M aspects of wind farms
- Testing & Certification of wind turbines
- Small wind turbine and hybrid systems

- Indian government policies, schemes and legal frameworks
- Wind energy developments in India
- Economics and CDM benefits of wind energy projects

RESOURCE PERSONNEL

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

WHO SHOULD ATTEND?

The course is aimed at professionals engaged in the energy planning and implementation and the technical personnel working or willing to work in the power generation industry, financial policy makers, students who wants to develop their career in wind energy sector.

The targeted participation would be drawn from academic institutes, industry, SNAs, developers and consultants. The programme is designed to cater for the needs of the technical personnel, scientists, engineers, project developers, managers, finance and insurance consultants from manufacturers, SNAs, NGOs, energy service companies, consultants, equipment suppliers, distributors, academic institutions, Government organizations and the media.

REASON 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. The course would also outline the government policies and wind energy scenario in India. The course would

facilitate an invaluable platform for dialogue and open exchange of views and experiences with scientists / professionals across the country. The course would give a picture of the know-how and pave the way to go about setting up a financially viable wind farm project.

COURSE HIGHLIGHT

Interactive sessions would also be organized with key personnel from Electricity Board, State Nodal Agencies, policy makers and regulatory bodies to develop awareness and understand how to mutually contribute to the development of an economically successful wind energy project.

VENUE

The venue for the course would be the Lecture Hall in the Centre for Wind Energy Technology, 657/1A2, Velachery - Tambaram Main Road, Pallikaranai, Chennai - 600 100.

COURSE FEE

This is a *non-residential* training course. The course fee is **Rs.10,000/-** (Rupees Ten Thousand Only) **per participant** and **Rs.2,500/-** (Rupees two thousand five hundred only) **for students**. Students need to provide a supporting bonafide certificate authorized by the head of the institution. The course fee must be paid by **demand draft drawn in favour of "Centre for Wind Energy Technology", payable at Chennai**. The course fee includes course material, lunch and refreshments and *excludes the accommodation*.

REGISTRATION

The enclosed registration form should be filled in all aspects and reach C-WET on or before 25th November 2009 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. 10,000/- or Rs. 2,500/- as the case may be.



7th National Training Course participants

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 located 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.



COURSE CO-ORDINATOR

P. KANAGAVEL

Scientist & Unit Chief i/c

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