C-WET

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pavan

A news bulletin from the Centre for Wind Energy Technology, Chennai

editorial...

The year that has gone by has seen tremendous progress, with the largest ever wind turbine getting installed. It is not merely this but also that a record number of MW got installed during 2004. A number of new entrants came on the horizon and this lead to the creation of a healthy competition among the manufacturers.

A recent tour to Car-Nicobar brought into focus the need to think of wind energy in a newer perspective. Today, almost all electrical energy required in the Islands is met by high speed diesel gensets. The delivered cost of such electricity is in the range of Rs 8-9 per kWh. This cost is additional to the issue of energy security being seriously compromised due to the ocean that separates the islands from the main land and among themselves as well. Another cost factor that is not generally understood from main land installations is the high corrosion levels. The maintenance of oil storage facilities poses major problems. The ladders meant for inspection of tanks are also eaten away in just three to four years. On the other hand most of RETs introduced in such situations have resulted in partial success. We learned that when batteries had to be topped up, seawater has been used. Besides frequently malfunctioning electronics has resulted in major problems of managing small systems.

There was this idea that Car-Nicobar, with its population of 25,000 persons should have wind power to supplement their energy requirements. The Islands, with their very limited area being free of vegetation, and areas which are not in the prohibited zones, both from light houses and light ships and coastal regulations, have made it difficult to locate just one or two machines of sizes that might make a difference to the fuel consumption on the islands. Eventually, after a great deal of discussion and consultation with the departments, it was found that for wind energy to be successfully used, many structural changes will need to be made in the long standing rules and regulations. The team returned with a workable solution that the location should be shifted to an alternate site about 15 km away known as 'Hog Point'. It was decided to take up measure winds at this new location and at the Indira Point. On the main land, winds have been monitored at the southern most point at Vivekananda Rock.

The team returned with a feeling of satisfaction that a long pending matter had been settled when we heard of the Tsunami and everything changed. C-WET lost its monitoring station at Vivekananda rock and it was found that the entire Hog Point in Car-Nicobar had been wiped off the map. Engineers from the Andaman and Nicobar administration have informed that the devastation was of such magnitude that assessment of damages itself will take months. Therefore we seem to have nature pushing the re-set button for us. We pray that life returns to near normalcy soon.

M.P. Ramesh
Executive Director

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MPEDC looking forward to biogas run pumps

Bhopal: In a bid to provide cheaper alternative sources of power, the Madhya Pradesh Energy Development Corporation (MPEDC) has proposed to test bio-gas-run irrigation pumps and set up three new wind power plants.

Three types of biogas plants – of 250,275 and 500 kg capacity – have been designed to run the irrigation pumps, which would offer organic manure worth Rs 27,000 to Rs 54,000 annually.

Despite a survey showing that the state had a potential of generating 5,500 MW power from wind energy, only one wind power plant of 21 MW has been set up in Dewas district so far, sources said, adding a proposal of starting three other plants was also tabled at the meeting.

Enercon's Concrete Tower

Two concrete towers 74.85 m high are under erection by Enercon India Ltd at Bhatia, District Jamnagar in Gujarat.

A cotton mill in Tamil Nadu unveils compact yarn plan – to use wind energy

Under the first phase of its implementation at a cost of Rs 68 crore, Ambika Cotton Mills Ltd, Tamil Nadu announced a new project for manufacturing high-quality compact yarn, including wind energy systems for captive consumption.

It expects revenues of Rs 91 crore and a net profit of Rs 13 crore during the period 2004-05 on completion of the project, which is expected to commence operation from July 2005. Wind energy for this project is 4 MW of five machines of 800 kW capacity.

The company has also informed that it has implemented a wind energy scheme for captive consumption at a capacity of 6.6 MW.

On completion, the total wind energy capacity of the company would be 13 MW, which would cater to the entire power requirements of the company with consequent benefits of reduction in power cost.

C-WET issues new list of WEG Manufacturers

The Centre for Wind Energy Technology (C-WET), Chennai, has issued a new list of WEG manufacturers superseding the earlier list issued on June 9, 2004.

New entries in the list are as follows:

- Category-A: Wind Turbines possessing valid type Approvals/Certificate
  - Enercon E-33, 330 kW with 33.4 m rotor dia and hub height of 49.04/ 49.92 m
  - NEG-Micon NM72C, 1500 kW with 72 m rotor dia and hub height of 62/78/ 80 m

- Category-B: Wind Turbines under type Certification/Testing at C-WET
  - Enercon E-48, 800 kW with 48 m rotor dia and hub height of 56.85/ 74.85 m
  - NEPC – NEPC-NORWIN-ASR 46/ 47, 600/750 kW with rotor dia 46/47 m and hub height of 45/60/65 m
  - Vestas RRB – Pawan Shakthi 600 kW with rotor dia 47 m and hub height of 65 m

Kerala government invites applications for wind power projects

The Government of Kerala has invited Pre-Qualification Applications for setting up Wind Power Projects in revenue land at Ramakkalmedu (10 MW) and Pushpakandam (15 MW) in District Idukki in Kerala on Build, Own, Operate and Transfer (BOOT) basis.

SUZLON's 2 MW WEG inaugurated

Suzlon's 2 MW WEG, the country's largest WEG as on date, was inaugurated recently at Sankaneri near Kanyakumari, Tamil Nadu on December 8, 2004 by Hon'ble Jaya Lalita, Chief Minister of Tamil Nadu.

Elecon to install WEGs in Tamil Nadu

Elecon Engineering Company Ltd., Vallabh Vidya Nagar, Gujarat is installing two of its 600 kW WEGs with 48 m rotor diameter and 50 m hub height in Edayarpalayam area, District Coimbatore in Tamil Nadu.

announcements

Farewell

Mr V. Asaithambi, Scientist 'C', R&D Unit decided to return to his parent department, CPRI after serving at C-WET from October 18, 2000 to December 14, 2004. Before joining the R&D Unit, he was looking after testing instrumentation, quality system management and related duties.

Executive Director, C-WET, felicitating Mr V. Asaithambi, Scientist

The domain name for C-WET, **www.cwet.res.in** has been registered, and an official e-mail facility has been provided to the C-WET staff.

CWET at work

An update of the activities at C-WET reflecting the continual improvement in systems, processes and knowledge for maintaining and improving the quality management system

45 kW Wind-Solar-Pungham Oil Tri-generation System

The R&D Unit proposes to set up a 45 kW Wind-Solar–Pungham Oil Tri-generation Integration System on the C-WET premises to meet the load demand partially and to undertake R&D studies on the system. The integrated system shall consist of:

- 10 kW (2x5 kW) small wind turbine generating system
- 15 kW Solar Photovoltaic (SPV) system, and
- 20 kW Pungham oil plant

Wind and solar energy is available in plenty in our country and can complement each other. Pungham oil is a biofuel, which is renewable and extracted from seeds of the *pongemia pinnata* tree. This oil can be used for generating power using a compression ignition engine, either by feeding raw oil into the engine or as a biodiesel.

The natural resources at the proposed project site have been evaluated for their ability to support a portion of the electrical energy needs of the Centre. The site feasibility for the tri-generation system has been evaluated based on the daily average of solar radiation, number of hours of prevailing solar radiation, wind speed and availability of pungham oil. The wind turbine will be installed in the open spaces available at C-WET.

BLADED training in progress

The SPV system is proposed to be installed on the roof of the C-WET building and the generator will be installed in the DG set room. The tri-generation system will have a maximum aggregate generation capacity of 45 kW.

BLADED Software Training

The R&D Unit has procured a "Bladed Software on Windows" from Garrad Hassan Partners Pvt Ltd, Bristol, England, for developing wind turbine rotor/blade profiles. The project has been initiated with the National Aerospace Laboratories (NAL), Bangalore, to look into developing wind rotor/blade profiles and effective applications. For efficient use of this software an intensive two-day training programme was arranged by C-WET, and conducted by the author/ developer Dr Ervin Bossanyi.

The objective of this project is to generate an indigenous design capability for the development of low-cost, technologically advanced wind turbine blades/rotors specifically for low/moderate wind regimes and dusty environment.

A SPV system is proposed to be installed on the roof of the C-WET building and a generator will be installed in the DG set room. The tri-generation system will have a maximum aggregate generation capacity of 45 kW

Installation of Solar Water Heater

The R&D Unit has installed a solar water heater system on the C-WET premises for supply of hot water to the canteen and guest rooms. The 300 litre system utilizes a closed loop soft water system keeping in view the uncertain quality of water that is available in and around Chennai.

Move on in the WRA Unit

New wind monitoring locations: Under the wind resource assessment in uncovered/new area programme of MNES, a 50 m tall mast with instrumentation at three levels was commissioned at Nayachar Island, West Bengal on 31 October 2004. The installation work for the commissioning of the two stations in Goa is under progress. Twenty wind monitoring stations have been commissioned under this programme.

The Andaman & Nicobar Islands Administration has sponsored a programme for wind resource assessment in the Islands. Four 30 m tall masts with instrumentation at two levels were

commissioned at Badmash Pahar, Corbins Pahar, Mt Harriet (all in South Andamans) and Sabari (in Middle Andamans) during December 2004. One station is proposed at the Indira Point of Great Nicobar Island.

A micrositing study has been carried out for Mysore Mercantile Co Ltd, Bangalore, for their wind farm site at Boranahalli in Chidradurga district of Karnataka. Another study was carried out at Radhapuram area in Tamil Nadu for NEPC Ltd, Chennai.

Steps Forward in Testing Unit

The windy seasons of 2005 appear to be a very busy time for the Testing Unit. Anticipating the rush, the unit is equipping itself with more instruments and getting ready for the calibration in a coordinated manner.

The Testing Team carried out dismantling of instrumentation deployed in Provisional Type Testing of Enercon 600 kW at Govindhapuram. Analysis and reporting works of the measurements obtained for this project is underway.

Preparations for testing of Pawan Shakthi (600 kW) are in full swing. Considering the ground situation, a revised test plan is being made. Strain gaging of all three blades were carried out at site. Further planning is being made, to carry out all instrumentation in the nacelle and tower legs at site.

Marching Ahead in the S&C Unit

Completed projects/activities

- Provisional Type Certificate of Suzlon 350/300 kW wind turbine renewed.
- Provisional Type Certificate has been issued to NEG MICON (India) Pvt Ltd for their NM48/ 750 kW wind turbine.
- The ISO 9001:2000 Quality Management System certification of C-WET have been maintained and the manual has been tailored to suit the other

Provisional Type Testing of Pawan Shakthi (600 kW) Site survey at Senjuvadi

accreditation requirements.

- List of manufacturers of wind electric generators was issued on October 18, 2004.

Current activities

- Continual improvement in systems, process and knowledge for maintaining and improving the quality management system is an ongoing process.
- Three certification projects under category II of TAPS–2000 for the next year have been taken up.

Highlights from ITCS Unit

National training course

A national training course on "Wind Farm Development and Related Issues" was organized successfully on October 14-15, 2004.

Mr A.M. Gokhale, Secretary, MNES inaugurating the course

The idea was to impart basic and advanced training and knowledge to personnel from industry, utilities, technical institutions and various central and state governmental implementing agencies.

The targeted participation was around 30 persons but there were more than 40 in the training.

Mr K.P. Sukumaran, Advisor, MNES, distributing the course certificate

International Training Programme

Under a government sponsored initiative, MNES asked C-WET to coordinate the initial part of the two-week programme to host about 20 participants from BIMSTEC and ASEAN Member countries. C-WET welcomed the participants and organised a well-received full-day workshop.

Participants for the training at C-WET

The following day the participants were taken to Auroville, Pondicherry, and to the blade manufacturing facilities set up by a private wind turbine generator manufacturer. In order to give field exposure, the team was then taken to the wind farm at Chitradurga area.

Field visit of foreign delegates at Chitradurga, Karnataka

The Wind Energy Sector in India – An Overview

Highlighting current developments

Introduction

India globally ranks fifth behind Germany, Spain, the US and Denmark in wind power generation. The installed wind power capacity in India crossed 3,000 MW in December 2004.

India is poised for accelerated growth and expansion in the wind energy sector and we can expect to achieve the target set by the planners for adding another 6,000 MW to the present installed capacity by the year 2012.

Background

After India gained independence, we made a systematic approach to harness wind for pumping water. The oil crisis of 1973 prompted the search for alternate sources of energy. India is the only country in the world to have a separate ministry, the Ministry of Non-conventional Energy Sources (MNES) to take care of all renewable sources of energy. Among the renewable energy technologies, wind is one of the most cost effective and we realized the scope for development of wind energy in the late 1970s.

The Wind Power Programme in India was initiated towards the end of the Sixth Plan, in 1983-84. A market-oriented strategy was adopted from inception, which has led to successful commercial development of the technology.

The National Programme includes wind resource assessment activities; research and development support; implementation of demonstration projects to create awareness and opening up of new sites; involvement of utilities and industry; development of infrastructural capability and capacity for manufacture, installation, operation and maintenance of wind electric generators; and policy support. The programme was aimed at catalyzing commercialization of wind power generation in the country.

The Wind Resource Assessment Programme is being implemented through the State Nodal Agencies and the Centre for Wind Energy Technology (C-WET). Demonstration wind power projects are implemented by the state governments through the State Nodal Agencies/State Electricity Boards.

R&D activities are undertaken through research institutions, national laboratories, universities and industry for development of cost-effective technologies and systems for improvement in quality of power generation from wind power projects.

Private investors and developers came forward to set up commercial wind power projects in different parts of the country during the late 1980s and early 1990s. However, the journey through the 1990s has not been smooth for the wind industry. There had been many ups and downs stemming from policy changes as well as lack of a uniform policy in the wind sector. The industry also got affected by the overall recession and economic slowdown. Today, the wind industry is addressing a matured market with quality products and the customers are highly discerning and extremely conscious with regards to the cost of energy generated per kW installed capacity.

The Wind Resource and Potential in India

Winds in India are influenced by the strong south-west summer monsoon, which starts in May-June and the weaker north-east winter monsoon, which starts in October. During the period March-August, the wind speeds are uniformly strong over the whole Indian Peninsula, except the eastern peninsular coast. Wind speeds during the period November–March are relatively weaker, though higher winds are available during a part of this period on the Tamil Nadu coastline.

State	Gross Potential (MW)	Technical Potential (MW)
Andhra Pradesh	8,275	1,750
Gujarat	9,675	1,780
Karnataka	6,620	1,120
Kerala	875	605
Madhya Pradesh	5,500	825
Maharashtra	3,650	3,020
Orissa	1,700	680
Rajasthan	5,400	895
Tamil Nadu	3,050	1,750
West Bengal	450	450
Total	45,195	12,875

The wind power potential of India as per the revised estimates of MNES has been assessed at around 45,000 MW. The technical potential is estimated about 13,000 MW, assuming 20 per cent grid penetration, which will go up with the augmentation of the grid capacity in the windy states.

The state-wise gross and technical potential assessment are given in the table.

Potential windy locations have been identified in the flat coastal terrains in Tamil Nadu, Kerala, Gujarat, Lakshadweep, Andaman & Nicobar Islands, Orissa and Maharashtra. Favourable sites have also been identified in some inland locations of Karnataka, Andhra Pradesh, Madhya Pradesh, West Bengal, Uttaranchal and Rajasthan.

Commercial Projects

A notable feature of the Indian wind programme has been the interest among private investors/developers in setting up of commercial wind power projects. A capacity of about 3,000 MW of

commercial wind power projects has so far been established, mainly in Tamil Nadu, Gujarat, Maharashtra, Karnataka, Kerala and Andhra Pradesh. More than 97 per cent of the investment in wind electric turbines in India has been in the private sector, reiterating the confidence of private sector investors in the wind energy projects sustained over the last two decades in the country. With the growing investor confidence and high performance of wind turbines the area is attracting tremendous investment from the private sector and the present growth of wind power in the country is more than 30 per cent per annum.

Fiscal and Promotional Incentives and Financing Mechanisms

A package of incentives is available for wind electric power projects which includes tax concessions such as 80 per cent accelerated depreciation, tax holiday, soft loans, customs and excise duty relief, liberalized foreign investment procedures, etc. The income tax, import and excise duty regimes are constantly being reviewed to allow induction, development and deployment of latest technologies and to provide for healthy competition.

Guidelines were issued by MNES to all the states on general policies and facilities for wheeling, banking, purchase of power and third party sale of power from such projects. It was proposed that the states may consider purchasing such power at least @ Rs 2.25/kWh (base year 1994-95). The guidelines also provide for annual escalation @ 5 percent and mechanism for security of payments for the power sold. Many windy states have already come forward and announced attractive policies for private sector investment in wind power projects.

Current Scenario

The wind energy sector has come of age in India. Our record of achievements in the wind sector inspires confidence among the people in general and private investors in particular. We have the potential, technology, experience and financial capacity to march forward in the path of vigorous growth and expansion – thus empowering the grid networks in the country with clean and green energy.

We have made great strides in technology to achieve impressive standards in quality and efficiency of the wind turbine equipment. All leading manufacturers have gone for a high degree of indigenization while introducing new models of wind turbines. There has been an appreciable shift towards higher performance machines. However due to logistics problems, we are not yet ready for very high capacities of above 2 MW which have already been introduced successfully in Europe. In the meantime, there has been substantial improvements in the turbines between 500 kW to 1.5 MW range.

A package of incentives is available for wind electric power projects which includes tax concessions such as 80 per cent accelerated depreciation, tax holiday, soft loans, customs and excise duty relief, liberalized foreign investment procedures, etc.

The machine availability has also gone up over 95 per cent. Plant load factor of 38 percent and more has been registered at various wind farms in various parts of in India. Wind farms of more than 10 MW capacity with central monitoring and control systems have been established in different states. Wind turbines have been installed in all types of terrain varying from sandy beaches and deserts to plain country hills and mountain ranges.

However, we face a big hurdle in the wind energy sector, which stems from lack of a uniform policy in the country. Power being a subject in the concurrent list, both central and state governments have jurisdiction over it resulting in no uniformity as regards the policies affecting the sector. We must have a national renewable energy policy/legislation encompassing all relevant aspects concerning production, transmission, distribution, sale and pricing of power generated from renewables as a whole and wind energy in particular.

Conclusions

The wind industry has done us proud. India is rated as a wind super power in the world thanks to the success achieved by the industry in the past two decades.

However, we need a firm and uniform policy across the country for smooth growth and further accelerated development of the wind energy sector. With dynamic policy initiatives, we will be able to attract more investment including FDI in this sector. However, for us to ensure a rapid, sustainable and orderly growth of the renewable energy sector as a whole and wind power in particular we need a national renewable energy policy/legislation at the earliest.

In summation, the current trends and developments in the wind sector are encouraging as the industry has matured in the country and it is driven by the performance of the wind turbines rather than being dependent on government subsidies and incentives. The future for the wind energy sector in India is extremely bright and wind power would go a long way in providing clean and green energy to the grid networks in the country – thus helping the government in realizing its vision of "Providing Power to All by 2012".

Courtesy: *Sarvesh Kumar, Chief Operating Officer, Vestas RRB India Limited*

EVENTS EVENTS EVENTS EVENTS EVENTS EVENTS

WIND EVENTS CALENDAR provides a comprehensive list of conferences, seminars, workshops, and exhibitions related to wind energy

December 2004, France	**Colloque Eolien de Caen (Wind Power in France)**, December 9-11, Caen, France. *Contact:* Patrice Grouzard, ADEME. Tel: +33 (0)4 93 65 31 96; http://www.ademe.fr
December 2004, Turkey	**Wind Turbine Techniques**, December 14, Ankara, Turkey. *Contact:* Bernd Neddermann, German Wind Energy Institute (DEWI), Tel: +49(0)4421-4808-65; b.neddermann@dewi.de; http://www.dewi.de
January 2005, USA	**5th Annual Harvesting Clean Energy Conference**, January 20-21, 2005, Heritage Inn, Great Halls MT, USA. *Contact:* Liz Reese, Climate Solutions, 716 NE 10th Street, North Bend, WA 98045, USA; lizre@centurytel.net; http://www.harvestcleanenergy.org
January 2005, Germany	**Clean Energy Power 2005**, January 26-27, 2005, Fairground Berlin, Germany. *Contact:* Elisabetta Alberti, erneuerbare energien, Unter den Linden 15, 72762 Reutlingen, Germany. Tel: +49-(0)7121-3016-0; Fax: +49-(0)7121-3016-100; redaktion@energie-server.de; http://www.energy-server.com
February 2005, USA	**5th Wind Energy & Power Markets Conference I**, February 2-3, 2005, Marriott Denver City Center, Denver, Colorado, USA. *Contact:* Anjali Schulte, Electric Utility Consultants, Inc. (EUCI), Tel: +1 303-770-8800; aschulte@euci.com; http://www.euci.com
February 2005, USA	**Wind Power Finance & Investment**, February 8-10, 2005, Rancho Bernardo Inn, San Diego, California, USA. *Contact:* Chelsea Levengood, Event Manager, Infocast. Tel: +1 818.888.4445 (Ext. 21); chelseal@infocastinc.com; http://www.infocastinc.com/wind.html
February 2005, USA	**Wind Generation in Power Systems: A Short Course on the Integration and Interconnection of Wind Power Plants into Electric Power Systems**, February 14-16, 2005, Palm Springs, California, USA. *Contact:* Sandy Smith, Communications Coordinator, Utility Wind Interest Group, Tel: (865) 691-5540, (Ext. 141); Fax: (865) 691-5046; sandy@uwig.org; http://www.uwig.org
February 2005, Spain	**Grid Connection of Wind Turbines**, February 15, 2005, Madrid, Spain. *Contact:* Bernd Neddermann, German Wind Energy Institute (DEWI), Tel: +49(0)4421-4808-65; b.neddermann@dewi.de; http://www.dewi.de
February 2005, Brazil	**RIO 5 World Climate & Energy – Latin American Renewable Energy Fair**, February 18-20, 2005, Fortaleza, Brazil. Vanessa Espi, RIO 5 LAREF. Tel: +55-21-22335184; Fax: +55-21-25182220; info@rio5.com; http://www.rio5.com
February 2005, USA	**Marketing Green Power: Profit Opportunities in Selling Renewable Energy**, February 23-24, 2005, Marriott Denver City Center, Denver, Colorado, USA. *Contact:* Anjali Schulte, Electric Utility Consultants, Inc. (EUCI), Tel: +1 303-770-8800; aschulte@euci.com; http://www.euci.com
February 2005, Australia	**4th Annual Australian Wind Energy Conference**, February 24-25, 2005, Stamford Grand, Adelaide, Australia. *Contact:* John Wilson, Marketing Manager, Informa Australia Pty Ltd, Level 2, 120 Sussex Street, Sydney, NSW 2000, Australia. Tel: +61 (0)2 9080 4364; Fax: +61 (0)2 9290 2577; john.wilson@informa.com.au; http://www.informa.com.au
February 2005, Germany	**erneuerbare energien 2005 and Passiv-Haus 2005 CCB**, February 25-27, 2005, Böblingen, Germany. *Contact:* Elisabetta Alberti, erneuerbare energien, Unter den Linden 15, 72762 Reutlingen, Germany. Tel: +49-(0)7121-3016-0; Fax: +49-(0)7121-3016-100; redaktion@energie-server.de; http://www.energy-server.com
February 2005, USA	**Conference on Renewable Energy in the Upper Midwest**, February 23-24, 2005, Alerus Center, Grand Forks, ND, USA. *Contact:* LaRae Foerster, Event Coordinator, Tel: +1 (701) 777-5246; lfoerster@undeerc.org; http://www.undeerc.org/re
March 2005, India	**Training on Wind Turbine Technology,** March 10-11, 2005 at C-WET http://www.cwet.tn.nic.in

C-WET Schedules National Training on *Wind Turbine Technology*

March 10-11, 2005

C-WET is organising a national training course for technical persons and field engineers in the wind power sector.

Course Fee

The course fee is Rs 2,000 (Rupees Two Thousand only) per participant and Rs 1,000 for students (with a supporting covering letter by the head of the institution). The demand draft should be drawn in favour of "Centre for Wind Energy Technology," payable at Chennai. The course fee includes course material, lunch and coffee / tea. Kindly use a copy of the registration form given along side (photocopies of the same can be used for registration). The application should be received on or before 28 February 2005. Detailed timetable will be sent with the confirmation letter.

Address for correspondence

Course coordinator
Information, Training and Commercial Services
Centre for Wind Energy Technology
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Chennai – 601 302
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Fax: +91-44-2246 3980
E-mail: pkanagavel@cwet.res.in
Web: http://www.cwet.tn.nic.in

REGISTRATION FORM

Full Name: .....

Position: .....

Organization: .....

Sponsoring Agency: .....

(Supported by a covering letter from the head of the institution)

Contact details:

Phone: .....

Fax: .....

Email: .....

Postal address: .....

Details of registration fee:

Amount: .....

Demand Draft No: .....

Date: .....

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Signature: .....

C-WET has shifted

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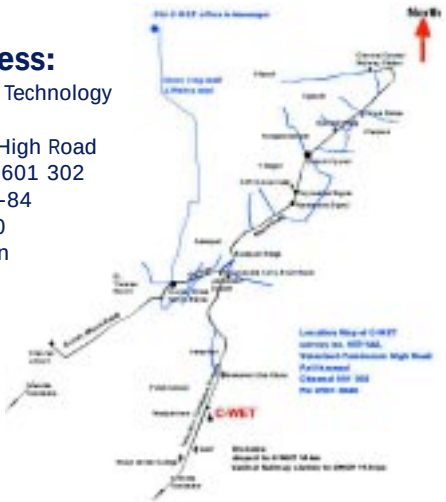
Web: www.cwet.tn.nic.in



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