

# **CENTRE FOR WIND ENERGY TECHNOLOGY**

## **CITIZEN CHARTER**

### **Our Vision**

The earth has umpteen challenges to face. The ever depleting natural resources and fossil fuels on the one hand and pollution driven green house emissions causing global warming on the other are the foremost among them. Centre for Wind Energy Technology addresses itself to these challenges. We strive to promote wind as an alternative source of energy to generate power and sustain development. Our vision is to place ourselves at the forefront of a world of intellectuals involved in reducing the risk of global warming to make this world a better place to live in for the generations to come.

### **2. Our Mission**

Centre for Wind Energy Technology (C-WET) is committed to achieve customer satisfaction, loyalty and confidence by providing credible, prompt and complete solutions for international quality to all the stakeholders in the wind energy sector by:

- Serving as the technical focal point for wind power development in India; for promoting and accelerating the pace of utilization of wind energy; and, support the growing wind power sector in the country.
- Developing and strengthening the facilities and capabilities, evolve strategies, promote, conduct, co-ordinate and support research and development programmes to achieve and maintain reliable and cost effective technology in wind power systems.
- Analyzing and assessing wind resources based on the data available from various sources and prepare wind energy density maps / wind atlas / reference wind data.
- Preparing and establishing standards including guidelines, procedures, protocols for design, testing and certification of wind power systems, sub-systems and components, taking into consideration the Indian conditions, and in line with internationally recommended practices and standards, and update the same based on the feedback.
- Establishing world class facilities, conduct and / or co-ordinate testing of complete wind power systems, sub-systems and components according to internationally accepted test procedures and criteria, whereby the total performance such as the power performance, power quality, noise level, dynamics, operation and safety systems are tested according to agreed protocols.
- According type approval / type certification which verifies conformity with safety related requirements as per standards, guidelines and other rules for design, operation and maintenance, as well as adequate documentation of quality issues such as power performance, noise, life expectancy and reliability.
- Monitoring the field performance of wind power systems, sub-systems and components; effectively utilize this feedback for fulfillment of the above objectives and review of certification; establish and update the data bank on a continuous basis and serve as information centre for selective dissemination.
- Undertaking Human Resource Development programmes for the personnel working in the wind energy sector.

- Promoting commercial exploitation of know-how, know-why results, and offer various consultancy services to the customers.
- Promoting the development and commercialization of any other wind energy systems, including stand-alone systems.

### **3. Our Clients**

Our major clients are :

1. Indian Railways
2. Steel Authority of India Limited
3. National Thermal Power Corporation Limited
4. National Hydro Electric Corporation Limited
5. Suzlon Energy Limited
6. Enercon (India) Limited
7. Vestas Wind Technology India Pvt. Ltd.
8. RRB Energy Limited
9. Pioneer Wincon Private Limited
10. Shriram EPC Limited
11. MSPL Limited

### **4. Services to the clients**

C-WET extends the following services to its clients:

#### **A. Testing Services**

- ❖ Power Performance Measurements
- ❖ Safety and function testing
- ❖ Yaw efficiency testing
- ❖ Loads measurements
- ❖ Power Quality measurements
- ❖ Power curve measurement
- ❖ Natural frequency measurement at standstill
- ❖ Any other user specific needs for measurements and verification

as per internationally accepted procedures and stipulation.

#### **B. R&D Services**

- ❖ Research and advanced technology development focusing on blade design and development for low wind regimes, improved mechanical transmission systems, new concepts of generators, power evacuation systems, design and development of controllers of wind turbines.
- ❖ Testing of small aero generators
- ❖ Demonstration of state-of-the-art technologies in renewable energy like wind-solar-diesel hybrid system with GPRS based remote monitoring.
- ❖ Improvement in performance of existing wind turbine installations
- ❖ Research support for wind resource assessment both for on-shore and off-shore applications.
- ❖ Manpower training at various skill levels including design engineering, installation.
- ❖ Preparation of syllabi for post-graduate courses in Wind Energy in Universities and Engineering colleges.

### **C. Certification Services**

- ❖ Type Certification of Wind Turbines as per "Type Approval - Provisional Scheme (TAPS - 2000)" amended.
- ❖ User specific evaluation of systems, sub-assemblies and components.
- ❖ Aero elastic and FEM analysis for whole or part of Wind Turbines.
- ❖ Spot Inspection of Wind Turbines.

### **D. Wind Resource Assessment**

- ❖ Establishing Wind Monitoring Stations, Data collection & Analysis.
- ❖ Site selection for the wind measurements programme.
- ❖ Wind measurements at the identified sites (long term 1 to 3 years), analyze the data and submit the report.
- ❖ Pre-feasibility study for wind farming projects (Micro survey).
- ❖ Wind Farm Planning.
- ❖ Assistance in all wind farming projects in (a) Site evaluation and (b) verifying generation estimates.
- ❖ Preparation of detailed project reports (DPR) for Wind Farm Project and it would contain the following Layout of wind farm, production, estimate, details of civil engineering and electrical work, project implementation plan and project cost analysis.
- ❖ Preparation of Tender Document.
- ❖ Helping the evaluation of tender as one of the tender evaluation committee members.
- ❖ Large scale scanning using state-of-art tools
- ❖ Design and implement comprehensive resource assessment programmes
- ❖ Co-ordinate applied research related to wind resource
- ❖ Provide Micro-siting services
- ❖ Due diligence.
- ❖ Preparing & vetting of details project reports
- ❖ Carry out analysis for maximizing wind farm outs.

### **E. Training**

- ❖ Wind Resource Modeling Techniques
- ❖ Wind Speed Statistics and Energy Calculations
- ❖ Micrositing and layout of wind farms
- ❖ Wind resource measurement
- ❖ Wind turbine technology
- ❖ Design methodology
- ❖ Awareness on safety systems in wind turbines
- ❖ O & M practices

## 5. Grievances Redressal

A grievances redressal mechanism is in the making in consultation with the stakeholders and manufacturers. Meanwhile, the following officers can be contacted for resolving grievances if any.

<b>Designation</b>	<b>Office contact No.</b>	<b>Residence contact no.</b>	<b>Email</b>
Shri.K.P.Sukumaran Executive Director	22463981	94440 51511	ed@cwet.res.in
Shri.Rajesh Katyal Unit Chief (R&D/ITCS)	65714240	94448 46791	katyal@cwet.res.in
Dr.E. Sreevalsan Unit Chief (WRA)	22463993	94448 46790	esree@cwet.res.in
Shri.S.A.Mathew Unit Chief (i/c) (Testing)	22463992	94448 46792	mathew@cwet.res.in
Shri.A.Senthilkumar Unit Chief (i/c) (S&C)	22463988	94448 46793	asenthilkumar@cwet.res.in
Shri.D.Lakshmanan General Manager (F&A)	22463985	94442 10322	dlakshmanan@cwet.res.in

## 6. Expectations from the clients

- ❖ Adherence to international standards in manufacture of wind turbine components
- ❖ Observance of proper license and collaboration agreements
- ❖ Providing test sites with suitable amenities conducive to establishing test facilities
- ❖ Request for wind resource assessment on acceptable data measurements of the region / area
- ❖ Furnishing proper documentation with licensing agreement and design data for type certification projects.