

MEMORANDUM OF UNDERSTANDING

FOR THE YEAR

2014-15

BETWEEN

**MINISTRY OF NEW AND RENEWABLE
ENERGY [MNRE]**

AND

**CENTRE FOR WIND ENERGY
TECHNOLOGY
[C-WET], CHENNAI-600-100**



CENTRE FOR WIND ENERGY TECHNOLOGY, CHENNAI

Memorandum of Understanding - 2014-15

PART – I OBJECTIVES

To serve 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.

To develop and strengthen 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.

To analyze and assess wind resources based on the data available from various sources and prepare and maintain wind energy density maps/ wind atlas/ reference wind data.

To prepare and establish 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.

To establish world class facilities, conduct and/or coordinate testing or 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, dynamics, operation and safety systems are tested according to agreed protocols.

To accord 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, life expectancy and reliability.

To monitor 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 center for selective dissemination.



To undertake Human Resource Development programmes for the personnel working in the wind energy sector.

To promote commercial exploitation of know-how, know-why results and offer various consultancy services to the customers.

To promote the development and commercialization of any other wind energy systems including stand-alone systems.

To carry out any other activity in the area of renewable energy under R&D, as may be assigned by the Ministry from time to time.

PART – II EXERCISE OF ENHANCED AUTONOMY AND DELGATION OF FINANCIAL POWERS

As per Rule 52 [a] of C-WET MOA, RRs and Bye-Laws the Executive Director has been delegated with full powers to incur expenditure on all C-WET activities upto the Budget Limit.

PART - III SPECIFIC PARAMETERS AND TARGETS

Whereas the basic function of the Centre is admittedly to serve as a Technical Focal Point in Wind Energy related areas, the Ministry of New and Renewable Energy [MNRE] on its part shall endeavor to provide besides adequate resources through full monetary support for the Centre to achieve its aims and objectives relevant to the technological/scientific needs of the Country and play a vital role in the national level Science and Technology Policy/Planning of the Country.

The Centre is committed to perform at its best in all spheres of its areas relating to Wind Energy and will continue to provide assistance and guidance in the Wind Energy related areas and shall maintain high standards of quality in its work.

Research and Development

[a] whereas the Centre recognizes that the process of developments has to relate Continuously to

I significant and notable changes that are taking place in the Wind related industry and

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II rapidly exploring universe of knowledge in the area

And for that purpose, the Centre has:

1. to survive on specialization, work increasingly in front line areas that transcend disciplines. The following thrust areas form a part of this effort.
 - Research and Development
 - Wind Resource Assessment
 - Wind Turbine Testing
 - Wind Turbine Research Station, Kayathar
 - Standards and Certification
 - Information, Training and Customized Services
 - Engineering Services Division
 - Solar Radiation and Resource Assessment Unit
2. to have a perception and a value system appropriate to the pursuit of high engineering science to meet the critically evaluated needs of the Industry
3. to programme into their activities emerging technological needs with futuristic needs
4. to maintain and foster interactive linkage with leading technological institutions and centres of research in India and abroad.

[b] Ministry of New and Renewable Energy [MNRE] on its part shall endeavor, besides providing adequate funding as per the approval of the Governing Council of C-WET for all the above activities

1. Industry-academic interaction will be encouraged and whatever incentives that are provided by the other Scientific Institutions to its staff shall be made available to the Centre's personnel staff;
2. to encourage measures necessary to create situations where the Centre's focus remains engaged within the country and outside in challenging tasks
3. to engage the Centre in the selective thrust areas of research and development; and
4. to support fully for efforts of the staff and the efforts for indigenous technology development.

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WORKING AMBIENCE

Whereas the institute shall endeavor to meet the objectives stated above, to the extent possible/feasible, the Ministry of New and Renewable Energy [MNRE] shall endeavor

1. to give external support to the Centre's Management for enforcing higher standards of achievements and reward the staff; and
2. to help the Centre to maintain highest standards even if it means modifying some of the Government's policies in the sphere of industrial relations and extent of autonomy.
3. to formulate guidelines by making it mandatory for the wind turbine manufactures to get C-WET clearance compulsorily before introducing any model in India, irrespective of the fact that they have obtained such approval from any institution abroad.
4. to allow C-WET's administrative matters to be settled and decided at the level of Executive Director C-WET and wherever considered necessary in consultation with the Chairman GC-CWET.

IMPLEMENTATION OF ACTION POINTS

[A] In consideration of action points to be implemented, the Centre shall make efforts:

- to reduce establishment related expenditure;
- to exert to submit Utilization Certificates and audited statement of accounts within the stipulated period of 6 months of closing of the financial year;
- to increase the internal generation of revenue by at least 10 to 20% every year.
- Shall undertake to achieve Dynamic Parameters in the above areas as indicated in the table below:

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DETAILS OF EXPENDITURE TO BE INCURRED DURING 2014-15

[Figures in lakhs]

Sl No	Details of expenditure to be incurred during 2014-15	BE 2014-15	Description of In-puts	Targeted outputs in measureable terms
1	Capital expenditure including equipments for Wind Turbine Testing station at Kayathar	50.00	Enhancement of R&D Lab equipments, and softwares, & high end data servers, Test kits for small turbines etc.	Carrying out R&D related activities in C-WET/WTTS Kayathar and elsewhere in the country.
2	Wind Resource Assessment in Ongoing /New Uncovered areas 2014-15	400.00	Procurement of equipments like Anemometer, server, sensors, measurement instruments etc. for WRA work	Selection/Placement of order and payment during the current year.
3	Research proposals as per R&D council approval	150.00	To carry out research relevant projects in wind turbine related area[s].	Sponsored research proposal with academic/R&D institutions
4	Recurring expenditure	350.00	Maintenance, up-keep expenses of the Centre [Chennai/Kayathar]	Essential need based expenditure.
5.	Information Testing and Commercial services	50.00	Purchase of journals, augmentation of facilities like server etc.	Up-gradation of facilities, information and dissemination etc.
	Total	1000.000		

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Sl. No	Criteria/Unit	Weigh- tage [%]	Excellent	Very Good	Good	Fair	Poor
			[1]	[2]	[3]	[4]	[5]
1	R&D Activities	15%	03 [@@]	03	02	01	00
2	Standards & Certification Assignments on Wind Turbine [*]	15%	02 [\$\$]	01	01	01	00
3	Testing of Wind Turbines [*]	15%	02 [&&]	02	02	01	00
4	Wind Resource Assessments A) Monitoring stations B) Consultancy Work	10%	90 [**] 130 [##]	80 115	70 105	60 100	50 90
5	Training Programme [National Level] International Training Programme	10% 15%	02 [++] 03 [+++]	02 02	01 01	-- --	-- --
6	Internal revenue generation	10%	600 Lakhs	550 lakhs	500 Lakhs	450 lakh	400 Lakh
7	Statutory Audit	05%	15.8.14	30.8.14	30.09.14	31.10.14	30.11.14
8	Submission of Utilization certificate to MNRE	05%	30.09.14	31.10.14	30.11.14	31.12.14	31.01.15
10	Total	100%					



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NATIONAL INSTITUTE OF WIND ENERGY, Chennai

IMPLEMENTATION OF ACTION POINTS

ADDENDUM TO THE MEMORANDUM OF UNDERSTANDING FOR THE YEAR 2014-15 BETWEEN MINISTRY OF NEW & RENEWABLE ENERGY (MNRE) AND NATIONAL INSTITUTE OF WIND ENERGY (NIWE) AS PER THE MNRE

O.M.No.8-1/2012-NIRE/BE dated 8.8.2014

Sl.No.	Implementation of Action Points	Achievement / Target Date
1.	Introductory video of 10 minutes	31.12.2014 (already a 20 minutes video made by Vigyan Prasar (DST organisation) is available)
2.	10 years vision document	30.09.2014 (Draft under review)
3.	Projects from multilateral /bilateral agencies to be raised by the institution : 10 million dollars	Will be explored. To review position by 31.12.2014.
4.	R&D MoU with three international institute of R&D	We have already entered into MoU with the following international institutes: M/s.GIZ, Germany M/s.Vortex Factoria de Calculs SL, Spain M/s.RISO National Laboratory, Denmark 5 year MoU with NREL, USA has been just completed.
5.	One industrial chair for professor with a focused research area	Action has been initiated with IWTMA & IWPA.
6.	Paid / unpaid internship scheme for 25/round the year scheme	Modalities being worked out. Scheme proposed to be in place by 31.12.2014.
7.	Quarterly presentation before Secretary on achievements (April, July, October and December)	As suggested presentation will be made.
8.	Undertaking 5 R&D projects from private sector on collaboration basis	<ol style="list-style-type: none"> 1. Study on power quality issues in grid connected wind farms and identification of remedial measures (completed). 2. Power Evacuation Studies For Grid Integrated Wind Energy Conversion System (completed). 3. Experimental characteristics of wind turbine blading over full 0 - 360° angle of attack (completed). 4. Health / condition monitoring at experimental / R&D wind farm at Kayathar on 2MW Wind Turbine (in progress). 5. Study and Control of weak grid connected matrix converter based DFIG system (in progress). 6. A Novel Hybrid Energy System for Supplying Isolated loads with FPGA based Energy Management Scheme (in progress).
9.	EBS at 50% of Government contribution	Efforts are on made to achieve the same during 2014-15.
10.	Quarterly review by Secretary, MNRE	April, July, October, January October, 2014 will be complied with.



[*] Standards and Certification/Testing assignments are subject to getting the wind turbine machines from the Industry [which as per the present guidelines are not mandatory] and further the Wind season being seasonal i.e from April to Sep, timely getting of assignments is a prerequisite for completion of the assignments. Further completion of assignments is mainly dependent upon submission of requisite documents in time by the party. Since the time required for completion of one Testing/Certification assignments is 15-18 months, only one assignment is normally possible to complete provided the required documents are submitted by the client within the period specified.

[@@] Number of assignments expected to be completed during 2014-15.

[\$\$] Number of assignments expected to be completed during 2014-15.

[&&] Number of assignments expected to be completed during 2014-15.

[**] Number of monitoring expected to be completed during 2014-15.

[##] Number of consultancy projects to be completed during 2014-15.

[++] Number of training programmes to be completed during 2014-15.

[+++] International training programme is Ministry/MEA sponsored.

[B] Pattern of release of grants by the MNRE

A] 100% of Recurring expenditure before 30th Sep 2014

B] 100% of Capital expenditure before 30th Sep 2014

C] 100% of expenditure on Special Projects as approved by the Ministry based on the recommendation of GC-CWET within 1 month of the submission of request for release of fund.

[C] Assistance from the MNRE

1] Non-Plan and Plan assistance as recommended by the GC CWET

2] Financial assistance to be reviewed and finalized in Aug./Sep.2014 to finalize grants for 2014-15.

3] Co-ordination with other Ministries/Institutions as and when necessary and required.

4] Any other manner in which MNRE wishes to assist the Centre through policy initiative or organizational facilitation.

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PART – IV COMMITMENTS ASSISTANCE
FROM THE GOVERNMENT
[MNRE].

The MNRE would take all possible measures within its means to enable C-WET to function effectively to attain its Objectives set forth in this MOU.

PART – V ACTION PLAN FOR
IMPLEMENTATION AND
MONITORING OF THE MOU.

The information on actual performance against targets set in the MOU would be reviewed by the GC-C-WET and follow-up action taken accordingly.



Dr S Gomathinaygam
Executive Director
C-WET Chennai



Dr Satish Balram Agnihotri
Secretary
MNRE New Delhi

Place: New Delhi

Date: 27/03/2014.

