

MEMORANDUM OF UNDERSTANDING

FOR THE YEAR

2016-17

BETWEEN

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

AND

**NATIONAL INSTITUTE OF WIND ENERGY
[NIWE], CHENNAI-600-100**



NATIONAL INSTITUTE OF WIND ENERGY, CHENNAI

Memorandum of Understanding - 2016-17

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 Indian standards on wind turbines and to develop and implement certification system in India.

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 that includes power performance, power quality, noise level, dynamics and operation and safety systems is tested according to agreed protocols.

To accord type approval/type certification to wind turbines in accordance with Type Approval Provisional Scheme TAPS 2000 (amended).

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 DELEGATION OF FINANCIAL POWERS

As per Rule 51 of NIWE MOA, RRs and Bye-Laws the Director General has been delegated with full powers to incur expenditure on all NIWE activities upto the Budget Limit.

PART – III

SPECIFIC PARAMETERS AND TARGETS

Whereas the basic function of the Institute 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 providing adequate resources, full monetary support for the Institute to achieve its aims and objectives relevant to the technological/scientific needs of the Country and play a vital role at the national level, in consonance with Science and Technology Policy/Planning of the Country.

The Institute 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 Institute 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
- II rapidly exploring universe of knowledge in the area

And for that purpose, the Institute has:

1. to survive on specialization, work increasingly in frontline areas that transcend disciplines. The following thrust areas form a part of this effort.

- Research and Development (NIWE)
- Offshore/Small Wind Hybrid System and Industrial Business (OSWHS&IB)
- Wind Resource Assessment (WRA)
- Wind Turbine Testing (WTT)
- Wind Turbine Research Station, Kayathar (WTRS)



- Standards and Certification (S&C)
 - Information, Training and Customized Services (ITCS)
 - Knowledge Sharing and Management (KSM)
 - Engineering Services Division (ESD)
 - Solar Radiation and Resource Assessment (SRRA)
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 Institutes 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 NIWE 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 Institute's personnel staff;
2. to encourage measures necessary to create situations where the Institute's focus remains engaged within the country and outside in challenging tasks
3. to engage the Institute 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.

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 Institute's Management for enforcing higher standards of achievements and reward the staff; and
2. to help the Institute 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.

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3. to formulate guidelines by making it mandatory for the wind turbine manufactures to get NIWE 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 NIWE's administrative matters to be settled and decided at the level of Director General, NIWE and wherever considered necessary in consultation with the Chairman GC- NIWE.
5. MNRE will provide an Economic Adviser at its own cost who will report to DG, NIWE, but whose Annual Performance Report will be written by Secretary, MNRE based on the feedback from DG. DG will utilize his/her services to reach the surplus annual target of Rs. 30 crore. (*)
6. 100 acre campus will be inaugurated in one years' time subject to allocation of land by the State Government, and sanction of required funds by MNRE and construction of the same by CPWD/NBCC (as the case may be)

(*) *For achieving the annual target of surplus by Rs.30 Crores by 2019, NIWE needs to be sanctioned additional 10 regular post of Scientist 'B' / 'C' by 2019.*

IMPLEMENTATION OF ACTION POINTS

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

- to absorb the establishment related expenditure from its internal earnings that is over and above the sanctioned grant by the Ministry under this head;
- 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:

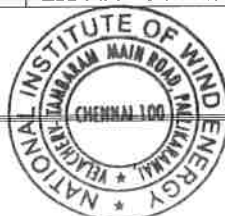


DETAILS OF EXPENDITURE TO BE INCURRED DURING 2016-17

[Figures in lakhs]

Sl. No.	Details of expenditure to be incurred during 2016-17	BE 2016-17	Description of Inputs	Targeted outputs in measureable terms
1	Capital expenditure	256.00	Computers, Civil Structure, Software, Journals and capacity building. Revenue Expenditure – Office related.	Carrying out R&D related activities in NIWE/WTRS Kayathar and elsewhere in the country. Compound Wall for both front portion by CPWD for security and safety.
2	Wind Resource Assessment	1100.00	Nearshore masts 100 meters one each at Kanyakumari and Gujarat for validating the LIDAR data. Preparation of Offshore Wind Atlas. Relocation, refurbishing and shifting of existing masts to new location based on the request of SNAs (25 Nos.). Installation of 50/80/100 masts in new and uncovered areas (as per request received from various SNAs – 60 new locations). Urban wind monitoring studies at 10/20m level in 16 districts in Tamilnadu.	Selection/Placement of order and payment during the current year.
3	Research proposals	550.00	Geophysical studies at Tuticorin district Tamilnadu. Procurement of Offshore LIDAR at Kanyakumari	Offshore demo wind farm [Tamilnadu / Gujarat] depending upon marine and ocean geophysical survey and associated clearances.

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Sl. No.	Details of expenditure to be incurred during 2016-17	BE 2016-17	Description of Inputs	Targeted outputs in measureable terms
			including substructure.	
4	Testing	84.00	Power quality, noise measurement, equipments and software for load measurement nacelle mounted LIDAR.	Selection/Placement of order and payment during the current year.
5	Standards & Certification	60.00	Standards and Certification Software/Hardware and Capacity building.	Selection/Placement of order and payment during the current year.
6	North East Wind Resource Assessment	200.00	2 nd Phase 50 Nos. of Masts, training and related activities NE.	Selection/Placement of order and payment during the current year.
7	Information Testing and Commercial services	50.00	Purchase of journals, augmentation of facilities like server etc.	Up-gradation of facilities, information and dissemination etc.
8	Recurring expenditure	400.00	Maintenance, up-keep expenses of the Centre [Chennai/Kayathar]	Essential need based expenditure.
	Total	2700.00		

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PHYSICAL DELIVERY TARGETS FOR THE YEAR 2016-17

1. Nearshore wind metmasts/uncovered/urban wind, 25 masts & 50 masts & 50 masts in North Eastern Region.
2. Wind Potential GIS Map for 120 m level
3. 125 consultancy projects on WRA
4. Establishment of 2 Research wind turbines 2 MW and 800 kW
5. 75 kW Wind-Solar Hybrid projects in Kayathar
6. 2 type tests of Wind Turbines and 2 power curve measurements
7. Conducting 5 wind energy soft skills training for NIWE Staff, 20 student projects (internship/ME/MTech thesis), Solar Energy & resource training for 200 participants from ISA member Countries, Wind Energy/Technology courses for 100 National and 50 International participants (ITEC-MEA)
8. NIWE-TUV Rheinland Certification projects-2
9. Offshore activities: Construction of monopile together with platform for mounting the offshore LIDAR at Gulf of Khambhat, Gujarat for wind profile measurements.
10. Completion of type testing of two small wind turbines underway at WTRS, Kayathar.

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Sl. No	Criteria/ Unit	Weightage [%]	Excellent	Very Good	Good	Fair	Poor
1	R&D Activities like Offshore/ Onshore/Lidar/ Platform	15%	03 [@@]	03	02	01	00
2	Standards & Certification Assignments on Wind Turbine and NIWE's collaboration with TUV Rhineland for Certification Services [*]	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 C) Offshore Lidar	4% 3% 3%	70 [**] 115 [##] 02	60 110 01	50 100 -	40 90 -	35 80 -
5	Training Programme [National Level] International Training Programme	10% 15%	02 [++] 02 [+++]	02 02	01 01	-- --	-- --
6 (*)	Internal revenue generation	10%	1350 Lakhs	1200 Lakhs	1125 Lakhs	1050 Lakhs	975 Lakhs
7	Statutory Audit	05%	15.8.16	30.8.16	30.9.16	31.10.16	30.11.16
8	Submission of Utilization certificate to MNRE	05%	30.9.16	31.10.16	30.11.16	31.12.16	31.1.17
	Total		100%				

(*) 50% increase in internal revenue will require additional 10 regular Scientific Staff at Scientist-B and above



[*] 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 perquisite 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 2016-17.
[\$\$] Number of assignments expected to be completed during 2016-17.
[&&] Number of assignments expected to be completed during 2016-17.
[**] Number of monitoring expected to be completed during 2016-17.
[##] Number of consultancy projects to be completed during 2016-17.
[++] Number of training programmes (40-50 participants in each programme) to be completed during 2016-17.
[+++] International training programme (20-30 participants in each programme) is Ministry/MEA sponsored.

Tatkal scheme of 25% higher fees with 25% reduced delivery time would be implemented by NIWE on a case by case basis in externally funded projects.

[B] Pattern of release of grants by the MNRE

- A] 100% of Recurring expenditure before 30th Sep 2016
B] 100% of Capital expenditure before 30th Sep 2016
C] 100% of expenditure on Special Projects as approved by the Ministry based on the recommendation of GC-NIWE 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, NIWE
2] Financial assistance to be reviewed and finalized in Aug./Sep.2016 to finalize grants for 2016-17.
3] Co-ordination with other Ministries/Institutions as and when necessary and required.
4] Any other manner in which MNRE wishes to assist the Institute through policy initiative or organizational facilitation.



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

The MNRE would take all possible measures within its means to enable NIWE 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-NIWE and follow-up action taken accordingly.



Dr S Gomathinaygam
Director General
NIWE Chennai



Shri. Upendra Tripathy
Secretary
MNRE New Delhi

Place: New Delhi

Date: 19/07/2016



