

WIND ENERGY PROJECT BY RAMCO GROUP IN INDIA. (2ND VERIFICATION)

Document Prepared By (MCL)

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Prepared By	<i>Madras Cements Limited</i>
Contact	<i>Mr. A. V. Dharmakrishnan</i> <i>98 A, Dr. Radhakrishna Road , Mylapore</i> <i>5th floor, Corporate Office, “Auras Corporate Centre”.</i> <i>Chennai- 600004</i> <i>Telephone: +9144 28478666</i>

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1 PROJECT DETAILS

1.1 Summary Description of Project

Ramco group, a well known business group in India, which has business interests in cements, textiles, fibre cements and software systems, covered by several companies of Ramco group which are run independently. These companies have invested in wind power generation in the states of Tamil Nadu and Karnataka, hereinafter referred to as the project activity. This monitoring report is prepared for verification of the voluntary emission reductions generated by the project activity

The project activity involves the implementation of 159.75 MW capacity wind power project consisting of 136 Wind Turbine Generators (WTGs) in Tirunelveli, Dindigul and Tirupur districts of Tamil Nadu, and Hassan and Chitradurga districts of Karnataka. All the WTGs have been commissioned. The power generated from wind energy is considered to be carbon neutral and hence does not contribute to any additional green house gas emissions. The project activity would generate about 324 GWh of electricity annually which would replace equivalent quantum of power at the Tamil Nadu Electricity Board (TNEB), Bangalore Electricity Supply Company Ltd (BESCOM) and Chamundeshwari Electricity Supply Corporation Ltd (CESC).

Owner	Number and Capacity (KW)	Utilization ¹
Madras Cements Limited	24 X 1650	Export to grid
	11 X 1650	Captive Consumption
	10 X 800	Captive Consumption
	43 X 800	Export to grid
Thanjavur Spinning Mills Limited	4 X 1250	Captive Consumption
Shri Vishnu Shankar Mill Limited	6 X 1250	Captive Consumption
	1 X 1650	Captive Consumption
Rajapalayam Mills Ltd	10 X 1250	Captive Consumption
	2 X 1650	Captive Consumption
Sandhya Spinning Mill Limited	4 X 1250	Captive Consumption
	1 X 350	Captive Consumption
Sudarsanam Spinning Mills	3 X 1250	Captive Consumption
	1 X 1650	Captive Consumption
Rajapalayam Textile (a division of Rajapalayam Mills Ltd)	1 X 1250	Captive Consumption
Ramco Industries Limited	6 X 1250	Captive Consumption
	2 X 800	Export to grid
	1 X 1500	Export to grid
	2 X 1650	Export to grid
	1 X 500	Captive Consumption
	1 X 750	Captive Consumption
Rajapalayam Spintext (a division of Rajapalayam Mills Ltd)	2 X 1250	Captive Consumption

¹ There were some changes in the utilization for some of the WTGs which is addressed in the Section 2.3 of this MR also the details are provided in the Annex 4. These changes occurred for some period of time from the original condition of utilization of the WTGs..

1.2 Sectoral Scope and Project Type

Methodology : ACM0002 -“Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 10

Sectoral Scope : 01 (Energy Industries – Renewable)

Scale : Large

1.3 Project Proponent

Organization:	Madras Cements Limited
Street/P.O.Box:	98 A, Dr. Radhakrishna Road , Mylapore
Building:	5th floor, Corporate Office, “Auras Corporate Centre”.
City:	Chennai
State/Region:	Tamil Nadu
Postfix/ZIP:	600004
Country:	India
Telephone:	+9144 28478666
FAX:	+9144 28478676
E-Mail:	-
URL:	http://www.madrascements.com/
Represented by:	-
Title:	-
Salutation:	Mr.
Last Name:	Dharmakrishnan
Middle Name:	V.
First Name:	A.
Department:	-
Mobile:	-
Direct FAX:	-
Direct tel:	-
Personal E-Mail:	avd@madrascements.co.in

1.4 Other Entities Involved in the Project

Name of Party involved (host indicates a host Party)	Private and/or public entity (ies) project participants (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
India (host Party)	• Thanjavur Spinning Mills Limited • Shri Vishnu Shankar Mill Limited • Rajapalayam Mills Ltd • Sandhya Spinning Mill Limited • Sudarsanam Spinning Mills • Ramco Industries Limited	No

The Contact details are same as above.

1.5 Project Start Date

30/01/2003 (Date on which first lot of WTGs were commissioned)

1.6 Project Crediting Period

Crediting period start date: 28/03/2006 (Starting date of first monitoring period as per the VCS guidance on start date)

Crediting period end date: 27/03/2016

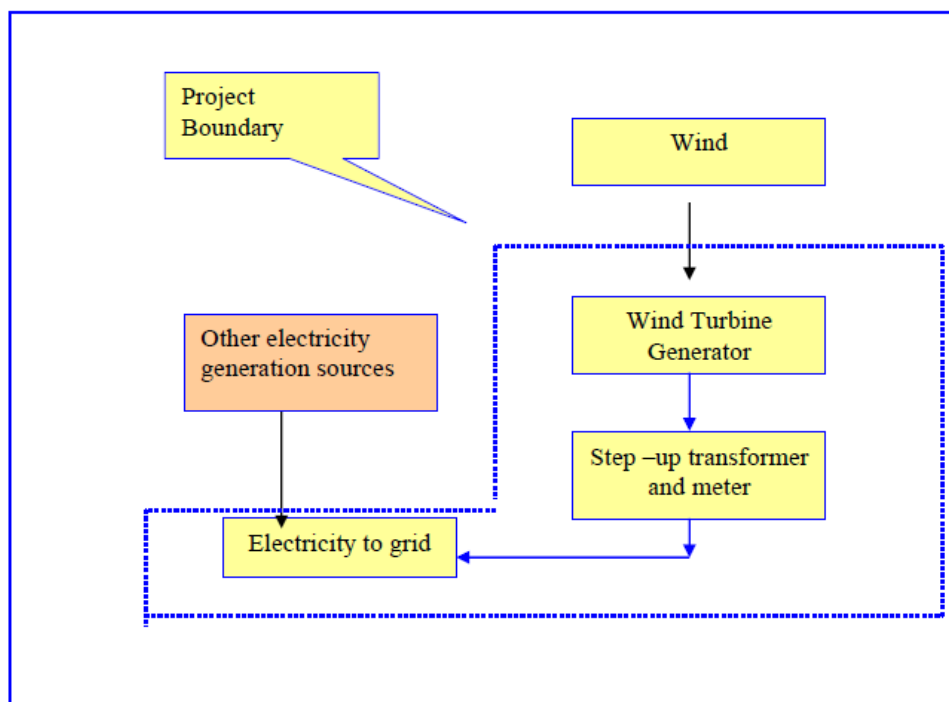
VCS project crediting period: 10 years crediting period, which will be renewed once.

1.7 Project Location

The project activity is located in Dhanakarkulam, Uthumalai, Irukanthurai, Kavalakuruchi, Thandayarkulam, Anaikulam, M.Krishnapuram, Kurichampatti, Vadiyoor, Pazhavor, Panagudi and Rajagopalaperi villages in Tirunelveli district of Tamilnadu; Kallupalayam, Thungavi, Udumalpet, Poolankinar and Periapatti villages in Tirupur district of Tamilnadu; Pushpathur village in Dindigul district of Tamilnadu; Gulihosahalli village in Chitradurga district of Karnataka; Aidahalli village in Hassan district of Karnataka. The specific location of each WTGs is provided in Annex 3.

Project boundary:

Project boundary is depicted in the diagram below:



1.8 Title and Reference of Methodology

Title: **ACM0002** -“Consolidated baseline methodology for grid-connected electricity generation from renewable sources”. Version: 10

Reference:

http://cdm.unfccc.int/UserManagement/FileStorage/CDMWF_AM_YOYKBRCBIK7TSPSB7MQT75SPX75PE8

The methodology refers to the following tools in order to calculate the emission reductions from the project activity:

- a) Tool to calculate the emission factor for an electricity system (version 1.1);
- b) Tool for the demonstration and assessment of additionality (version 5.2);
- c) Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (version 02)

2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

The project activity involves the implementation of 159.75 MW capacity wind power project consisting of 136 Wind Turbine Generators (WTGs). All the WTGs were commissioned as described in the validated PD and were operational during the current monitoring period.

2.2 Deviations from the Monitoring Plan

The monitoring is performed in order to calculate the emission reductions which is provided in the JMRs prepared by TNEB, and BESCOM and CESCO.

1. The emission reduction calculated for WTGs located in the state of Tamilnadu is as follows:

For WTG's those are used for captive consumption:

Net electricity supplied to the grid = (Net electricity exported to the grid) – wheeling charges (in kwh).
Wheeling charges are calculated by multiplying 5 % with the total electricity exported to the grid.

For WTG's those export electricity to the grid:

Net electricity supplied to the grid = (Net electricity exported to the grid – Net electricity imported)

2. The emission reduction calculated for WTGs located in the state of Karnataka is as follows:

Since both the WTGs export electricity to grid

Net electricity supplied to grid = Net export – Net import – Transmission losses

2.3 Grouped Project

This is a grouped project. The project has been operational as described in the PDD. There have not been any new instances other than the change in utilization of the WTGs. However, these changes have been noticed for a short period of time during this monitoring period. The WTGs continue to operate as described in the registered PDD. The details of change of utilization and time period is provided in Annex 4.

There has been no shut downs or break down in the operation of any WTGs during this monitoring period.

3 DATA AND PARAMETERS

3.1 Data and Parameters Available at Validation

Data Unit / Parameter:	EF_y
Data unit:	tCO ₂ /MWh
Description:	Combined Margin CO ₂ emission factor of the regional grid
Source of data:	CO ₂ baseline database for the Indian Power Sector – Central Electricity Authority (CEA), Ministry of Power, Version 4.0, dated September 2008
Value applied:	0.92694
Purpose of the data:	The above data is used for estimating the baseline emissions. The considered emission factor is a combined margin of Southern Grid, as established in the registered VCS PD.
Any comment:	Details given in Annex-4 of VCS PD

3.2 Data and Parameters Monitored

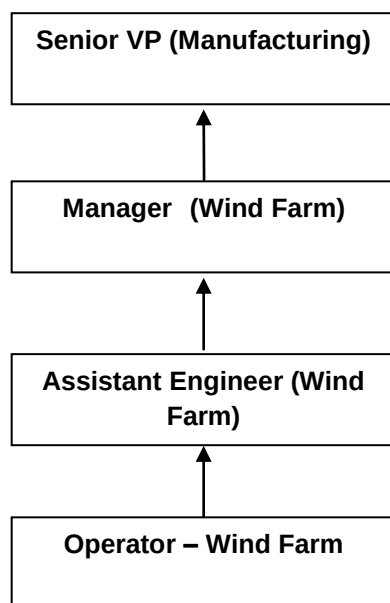
Data Unit / Parameter:	Electricity Quantity (EG_y)		
Data unit:	MWh		
Description:	Net electricity supplied to the grid.		
Source of data:	Joint Meter Reading (JMR) report and log book		
Description of measurement methods and procedures to be applied:	The metering equipment is located at each WTG's location and the energy is metered by the SEBs at the high voltage side of the step up transformers installed at each HTSC connection. Monthly meter reading is recorded by the authorized representatives of SEBs in presence of the representative of Ramco group. In addition to this officials (site staff) of Ramco Group record daily reading from the SEB meter		
Frequency of monitoring/recording:	Monthly recording		
Value monitored:	2008	20014	
	2009	384421	
	2010	345449	
	2011	48557	
	Total	798440	

Monitoring equipment:	Type: Energy Meter Accuracy Class: 0.5 Calibration frequency: Once in five years Serial number of the equipment is tabulated in Annex 2.
QA/QC procedures to be applied:	As per the Power Purchase Agreement (PPA) with SEBs, all the energy meters and the meter boxes will be kept sealed by SEBs. Hence SEBs is responsible for maintenance and calibration of the main energy meter as per their standard norms. In Ramco Group, Assistant Engineer (AE) - Wind Farm is responsible for collecting the required information from the operators, who look after the day to day operation of the WTGs at the ground level. The AE – Wind Farm records the generation on a daily basis for each service connection point and reports the cumulative generation to the Manager - Electrical. The Manager – Electrical reports to the DGM – Wind Farm on a daily basis. The DGM – Wind Farm is responsible for overall operation of the WTGs.
Calculation method:	For WTG's that are used for captive consumption, the net electricity supplied to the grid is a calculated figure that uses the formula as given below: Net electricity supplied to the grid = (Net electricity exported to the grid) – wheeling charges (in kwh). Wheeling charges are calculated by multiplying 5 % with the total electricity exported to the grid. For WTG's that export electricity to the grid, the net electricity supplied to the grid is a calculated figure that uses the formula as given below: Net electricity supplied to the grid = (Net electricity exported to the grid) where the net electricity supplied is calculated by deducting the electricity imported from the electricity exported. -
Any comment:	Daily SEB Meter readings recorded by Ramco Group staff in the log book will serve as the source of data when the individual verification period dates and the dates of JMRs of the various WTGs in the project activity do not coincide. The data is archived for a period of two years after crediting period.-

3.3 Description of the Monitoring Plan

Organization structure for monitoring:

The day to day operation of the WTGs at the ground level is looked after by the operator. The operator reports to the Assistant Engineer (AE) - Wind Farm, who is responsible for collecting the required information from the operator. The AE – Wind Farm records the generation on a daily basis for each service connection point and reports the cumulative generation to the Manager – Wind Farm. The Manager –Wind Farm reports to the Senior Vice President (Senior VP) – Manufacturing on a daily basis. The Senior VP – Manufacturing is responsible for overall operation of the WTGs. The organisation structure is given below in Fig 3.1: The process of emission reduction calculation is the responsibility of the consultant to the PP for management of the VCS project.



Energy meter accuracy check and calibration details:

As per the registered PD, the electricity meter would be calibrated by the State Electricity Boards (SEBs) as per their norms. For the calibration of meters, the SEB refers to Central Electricity Authority (CEA) installation and operation of meters regulations 2006, which state that all the meters shall be tested at least once in five years. The dates of calibration, accuracy class of the meters, and result for all the HTSC are provided in Annex 1 and the meter failure details are provided in Annex 2. The accuracy class of all the meters is 0.5.

Training of monitoring personals:

The training for the O&M team at Pushpathur site has been conducted by Enercon Training Academy, Daman. The training certificate for which is provided to the DOE.

The training record for Udumalpet site is provided separately to the DOE containing detailed procedure of the training of personals.

The training records for other sites and O&M operators are also provided to the DOE separately.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

Baseline emissions (BE_y in tCO_2) due to displacement of grid-electricity is calculated as the product of the Baseline Emissions Factor (EF_y in tCO_2/MWh) calculated as described below, times the electricity supplied by the project activity to the grid ($EG_y - EG_{baseline}$ in MWh), over the crediting period.

$$\begin{aligned} BE_y &= (EG_y - EG_{baseline}) \times EF_y \\ &= (798439650 - 0) \text{ kWh} \times 0.92694 \text{ tCO}_2/\text{MWh} \\ &= (798439650 \times 0.92694)/1000 \\ &= 740105^2 \text{ t CO}_2 \end{aligned}$$

Where:

EG_y : Net Electricity supplied by the project activity to the grid (MWh)

$EG_{baseline}$: Baseline electricity supplied to the grid in the case of modified or retrofit facilities (MWh). For new power plants this value is taken as zero. As this is a new power plant this is zero for the project

EF_y : Combined margin CO_2 emission factor for grid connected power generation in the year y .

4.2 Project Emissions

According to the baseline methodology ACM0002 (Version 10), the GHG emission of the proposed project within the project boundary is zero, i.e.

$$PE_y = 0$$

4.3 Leakage

Emissions Leakage on account of the project activity is ignored in accordance with ACM0002, version 10.

$$L_y = 0$$

4.4 Summary of GHG Emission Reductions and Removals

$$ER_y = EG_y \times EF_y$$

For WTGs that are used for captive consumption, the net electricity supplied to the grid is calculated using the formula as given below

Net electricity supplied to the grid = (Net electricity exported to the grid) – wheeling charges (in kwh).

² This value is rounded down

Wheeling charges are calculated by multiplying 5 % with the total electricity exported to the grid. As per the procedure wheeling charges are not considered for WTGs that export electricity to the grid.

Year	Emission Reduction (tCO ₂)
2008	18,551
2009	356,335
2010	320,210
2011	45,009
Total	740,105

The Emission Reductions in the monitoring period is 6% less than it was estimated at the VCS PD. The difference in the total CERs is due to low wind availability leading to low plant load factor in past two years. The same is presented in the table below:

Emission Reductions (tCO ₂) as per VCS PD (Ex-ante)	Emission reductions actual (tCO ₂)
785223 (29 months equivalent of estimated annual emission reductions of 324290 tCO ₂)	740,105 tCO ₂ (29 months)

Month and Year	Net Power exported (MWh)	Emission Factor (tCO ₂ /MWh)	Baseline Emission (tCO ₂)	Project Emission (tCO ₂)	Emission Reductions (tCO ₂)
2008					
November	2085	0.92694	1932	0	5181
December	17929	0.92694	16619	0	17217
2009					
January	11994	0.92694	11118	0	11118
February	13384	0.92694	12406	0	12406
March	6678	0.92694	6190	0	6190
April	5613	0.92694	5203	0	5203
May	31352	0.92694	29062	0	29062
June	57881	0.92694	53652	0	53652
July	64651	0.92694	59927	0	59927
August	70758	0.92694	65588	0	65588
September	49628	0.92694	46002	0	46002
October	45409	0.92694	42091	0	42091
November	8539	0.92694	7915	0	7915
December	18536	0.92694	17181	0	17181
2010					
January	5979	0.92694	5542	0	5542
February	15738	0.92694	14588	0	14588
March	9508	0.92694	8813	0	8813
April	10527	0.92694	9758	0	9758
May	12734	0.92694	11803	0	11803
June	53388	0.92694	49488	0	49488
July	51373	0.92694	47620	0	47620
August	67166	0.92694	62259	0	62259
September	57359	0.92694	53169	0	53169
October	28732	0.92694	26632	0	26632
November	22940	0.92694	21264	0	21264
December	10007	0.92694	9276	0	9276
2011					
January	18005	0.92694	16690	0	16690
February	15188	0.92694	14079	0	14079
March	15363	0.92694	14241	0	14241

5 ADDITIONAL INFORMATION

Deviations from the validated PD

- As per validated PD the owner of wind mill having HTSC No 973 is Ramco Industries Limited (RIL). However, the wind mill corresponding to HTSC no. 973 is actually owned by Sri Ramco Spinners (SRS) and the same was substantiated during the previous monitoring period by referring to the commissioning certificate and the calibration certificate for HTSC No. 973 which mentioned that the WTG is owned by Sri Ramco Spinners (SRS)³.
- The validated PD mentions that the MCL owned (10x800kW) Enercon machines in Pushpathur region are used for captive consumption. However for the period from 01.11.2008 to 23.09.2009

³ The commissioning certificate and calibration certificate for HTSC no. 973 were provided to the DOE, and the same verified by the DOE during previous monitoring period

and from 27.01.2011 to 31.03.2011, the above mentioned machines were used for supply of electricity to grid. Between these periods i.e. from 23.09.2009 to 27.01.2011, these WTGs were used for captive consumption as mentioned in the validated PD

- The validated PD mentions that the MCL owned The 8 X 1650 Vestas machines with HTSC Nos. 2505, 2506, 2507, 2509, 2510, 2522, 2616, 2629 are for supply of electricity to grid. However, for the period from 19.09.2009 to 28.02.2011, the above mentioned machines were used for captive consumption. For the remaining period i.e. from 01.11.2008 to 18.09.2009 and from 01.03.2011 to 31.03.2011, these WTGs were used for supply of electricity to grid as mentioned in the validated PD⁴.
- The 2 X 1650 NEG MICON WTGs owned by Ramco Industries Ltd. with HTSC No. 1525 and 1526 are utilized for supply of electricity to grid. However from the period of 15/07/2009 and 28/07/2009 respectively they are utilized for captive consumption. Prior to this the WTGs were utilized for electricity export to the grid as mentioned in the validated PDD.

⁴ Details for each WTG is provided in tabular form in Annex 4

Annex 1

Meter Calibration

HTSC No.	Date of Commissioning	1 st Date of calibration	2 nd Date of calibration	Validity of calibration	Result
MCL Pushpathur					
D31	27.02.07	27/2/2007	-	27/2/2012	Satisfactory
D69	29.03.07	29/3/2007	-	29/3/2012	Satisfactory
D76	16.04.07	16/4/2007	-	16/4/2012	Satisfactory
D77	16.04.07	16/4/2007	-	16/4/2012	Satisfactory
D97	23.07.07	23/7/2007	-	23/7/2012	Satisfactory
D98	23.07.07	23/7/2007	-	23/7/2012	Satisfactory
D99	23.07.07	23/7/2007	-	23/7/2012	Satisfactory
D100	23.07.07	23/7/2007	-	23/7/2012	Satisfactory
D101	02.08.07	2/8/2007	-	2/8/2012	Satisfactory
D102	02.08.07	2/8/2007	-	2/8/2012	Satisfactory
D115	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D116	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D117	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D118	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D119	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D120	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D121	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D122	27.09.07	27/9/2007	-	27/9/2012	Satisfactory
D129	28.09.07	28/9/2007	-	28/9/2012	Satisfactory
D132	02.01.08	2/1/2008	-	2/1/2013	Satisfactory
D133	02.01.08	2/1/2008	-	2/1/2013	Satisfactory
D134	02.01.08	2/1/2008	-	2/1/2013	Satisfactory
D135	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
D136	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
D137	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
D138	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
D139	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
D140	15.03.08	15/3/2008	-	15/3/2013	Satisfactory
MCL Thandyarkulam					
2357	04.06.07	18/12/08	7/4/2010	7/4/2015	Satisfactory
2358	04.06.07	18/12/08	7/4/2010	7/4/2015	Satisfactory
2359	04.06.07	18/12/08	7/4/2010	7/4/2015	Satisfactory
2360	04.06.07	18/12/08	7/4/2010	7/4/2015	Satisfactory
2361	05.06.07	15/12/08	7/4/2010	7/4/2015	Satisfactory
2362	05.06.07	15/12/08	7/4/2010	7/4/2015	Satisfactory
2367	14.06.07	15/12/08	7/4/2010	7/4/2015	Satisfactory
2368	15.06.07	18/12/08	7/4/2010	7/4/2015	Satisfactory
MCL Uthumalai					
1528	31.12.05	08/08/08	12/1/2010	12/1/2015	Satisfactory
1529	31.12.05	08/08/08	12/1/2010	12/1/2015	Satisfactory
1530	31.12.05	09/03/09	12/1/2010	12/1/2015	Satisfactory
1531	31.12.05	08/08/08	20/2/2010	20/2/2015	Satisfactory
2037	28.09.06	15/10/08	18/3/2010	18/3/2015	Satisfactory
2038	28.09.06	15/10/08	6/4/2010	6/4/2015	Satisfactory
2039	28.09.06	14/10/08	6/4/2010	6/4/2015	Satisfactory
2067	29.09.06	22/07/09	6/4/2010	6/4/2015	Satisfactory
2068	29.09.06	15/10/08	6/4/2010	6/4/2015	Satisfactory

2505	31.12.07	-	6/4/2010	6/4/2015	Satisfactory
2506	22.01.08	-	6/4/2010	6/4/2015	Satisfactory
2507	24.01.08	-	6/4/2010	6/4/2015	Satisfactory
2509	04.02.08	-	6/4/2010	6/4/2015	Satisfactory
2510	13.02.08	-	6/4/2010	6/4/2015	Satisfactory
2522	17.03.08	-	6/4/2010	6/4/2015	Satisfactory
2616	22.04.08	-	6/4/2010	6/4/2015	Satisfactory
2629	23.05.08	-	7/4/2010	7/4/2015	Satisfactory
MCL Udumalpet					
U1459	27.07.07	27/7/2007	11/05/10	27/7/2012	Satisfactory
U1460	31.07.07	31/7/2007	11/05/10	31/7/2012	Satisfactory
U1464	16.08.07	16/8/2007	11/05/10	16/8/2012	Satisfactory
U1465	16.08.07	16/8/2007	11/05/10	16/8/2012	Satisfactory
U1468	22.08.07	22/8/2007	26/04/10	22/8/2012	Satisfactory
U1469	22.08.07	22/8/2009	26/04/10	22/8/2014	Satisfactory
U1522	29.03.08	29/3/2008	26/04/10	29/3/2013	Satisfactory
U1532	31.03.08	31/3/2008	26/04/10	31/3/2013	Satisfactory
U1310	29.09.06	29/9/2006	26/04/10	29/9/2011	Satisfactory
U1311	29.09.06	29/9/2006	26/04/10	29/9/2011	Satisfactory
RIL					
HTSC No.	Date of Commissioning	1 st Date of calibration	2 nd Date of calibration	Validity of calibration	Result
271	31.03.04	27/04/10	-	15/4/2015	Satisfactory
426	21.03.04	24/01/08	7/4/2010	6/4/2015	Satisfactory
468	30.01.03	13/10/08	5/4/2010	4/4/2015	Satisfactory
510	25.03.03	10/07/08	7/4/2010	6/4/2015	Satisfactory
630	30.09.03	12/07/07	6/4/2010	5/4/2015	Satisfactory
1383	15.09.05	04/01/08	5/4/2010	4/4/2015	Satisfactory
1384	15.09.05	08/01/08	5/4/2010	4/4/2015	Satisfactory
1525	28.12.05	12/08/08	7/4/2010	6/4/2015	Satisfactory
1526	28.12.05	12/08/08	7/4/2010	6/4/2015	Satisfactory
ELP-27	31.03.06	24/07/09	-	23/7/2014	Satisfactory
H-31 ⁵	10.10.07	25/11/08	-	25/11/2013	Satisfactory
HTSC No.	Date of Commissioning	1 st Date of calibration	2 nd Date of calibration	Validity of calibration	Result
RMU					
978	30.09.04	08/01/08	5/4/2010	4/4/2015	Satisfactory
RST					
975	30.09.04	07/02/09	6/4/2010	5/4/2015	Satisfactory
977	30.09.04	16/12/08	6/4/2010	5/4/2015	Satisfactory
Sandhya					
631	30.09.03	16/12/08	6/4/2010	5/4/2015	Satisfactory
632	30.09.03	20/6/08	6/4/2010	5/4/2015	Satisfactory
1422	27.09.05	4/1/08	5/4/2010	4/4/2015	Satisfactory
1468	29.09.05	8/1/08	5/4/2010	4/4/2015	Satisfactory
1044	18.11.04	22/10/08	6/4/2010	5/4/2015	Satisfactory
SRS					
973	30.09.2004	16/12/08	6/4/2010	5/4/2015	Satisfactory
SSM					
578	21.09.03	7/1/08	5/4/2010	4/4/2015	Satisfactory
579	21.09.03	18/12/08	5/4/2010	4/4/2015	Satisfactory

⁵ Meter Accuracy class of 0.2

926	23.09.04	4/6/07	5/4/2010	4/4/2015	Satisfactory
1540	31.12.05	23/2/09	7/4/2010	6/4/2015	Satisfactory
SVSM					
587	21.09.03	22/11/2005	6/4/2010	5/4/2015	Satisfactory
588	22.09.03	5/12/2006	6/4/2010	5/4/2015	Satisfactory
974	30.09.04	7/1/2008	6/4/2010	5/4/2015	Satisfactory
976	30.09.04	27/12/2007	7/2/2009	4/4/2015	Satisfactory
1333	16.07.05	5/2/2009	5/4/2010	4/4/2015	Satisfactory
1354	12.08.05	5/2/2009	5/4/2010	4/4/2015	Satisfactory
1527	28.12.05	23/2/2009	7/4/2010	6/4/2015	Satisfactory
TSML					
625	29.9.03	2/12/2006	6/4/2010	5/4/2015	Satisfactory
626	29.9.03	18/12/2008	6/4/2010	5/4/2015	Satisfactory
1041	21.10.04	6/12/2008	6/4/2010	5/4/2015	Satisfactory
1748	30.3.06	2/6/2008	6/4/2010	5/4/2015	Satisfactory
RML					
576	21.09.03	30/11/2006	5/4/2010	4/4/2015	Satisfactory
577	21.09.03	30/11/2006	5/4/2010	4/4/2015	Satisfactory
944	28.09.04	5/12/2006	5/4/2010	4/4/2015	Satisfactory
972	30.09.04	9/11/2006	5/4/2010	4/4/2015	Satisfactory
979	30.09.04	4/1/2008	5/4/2010	4/4/2015	Satisfactory
980	30.09.04	29/11/2006	5/4/2010	4/4/2015	Satisfactory
1022	30.09.04	20/12/2007	5/4/2010	4/4/2015	Satisfactory
1347	04.08.05	8/1/2008	5/4/2010	4/4/2015	Satisfactory
1348	04.08.05	8/1/2008	5/4/2010	4/4/2015	Satisfactory
1467	29.09.05	8/1/2008	5/4/2010	4/4/2015	Satisfactory
1582	28.02.06	12/8/2008	7/4/2010	6/4/2015	Satisfactory
1691	27.03.06	12/8/2008	7/4/2010	6/4/2015	Satisfactory

Annex 2

Meter change records for current monitoring period (NOV-2008 TO MARCH-2011)

S.NO	HT SC NO	DETAILS OF OLD METER			DETAILS OF NEW METER		
		METER SL NO	MAKE	DATE OF FAILURE	METER SL. NO	MAKE	DATE OF REPLACEMENT
MCL Pushpathur							
1	D119	04901298	ELSTER	26.11.2010	10267837	L & T	27.11.2010
MCL Thandyarkulam							
1	2361	04 804 553	ELSTER	05.06.10	TNB 04109	PREMIER	05.06.10
MCL Uthumalai							
1	1530	04725659	ELSTER	09.03.2009	04892520	ELSTER	09.03.2009
2	2067	04863470	ELSTER	22.07.2009	08040605	L & T	22.07.2009
3*	1528	04725718	ELSTER	12.01.2010	09593230	L & T	12.01.2010
4*	1529	04725717	ELSTER	12.01.2010	09593232	L & T	12.01.2010
5*	1530	04892520	ELSTER	12.01.2010	09593233	L & T	12.01.2010
6	1531	04725723	ELSTER	20.02.2010	TNB04107	PREMIER	20.02.2010
7	2037	04862846	ELSTER	18.03.2010	TNB04543	PREMIER	18.03.2010
8*	2505	04902015	ELSTER	19.02.2011	09593234	L & T	19.02.2011
9*	2506	04901389	ELSTER	19.02.2011	09593235	L & T	19.02.2011
10*	2507	04892643	ELSTER	19.02.2011	09593236	L & T	19.02.2011
11*	2509	04902034	ELSTER	19.02.2011	09593237	L & T	19.02.2011
12*	2510	04901474	ELSTER	19.02.2011	09593239	L & T	19.02.2011
13*	2522	04901392 (Main)	ELSTER	19.02.2011	09593240	L & T	19.02.2011
		04901390 (Check)	ELSTER	19.02.2011			
14*	2616	04939514 (Main)	ELSTER	19.02.2011	10287890	L & T	19.02.2011
		04939501 (Check)	ELSTER	19.02.2011			
15*	2629	04938093 (Main)	ELSTER	19.02.2011	10287951	L & T	19.02.2011
S.NO	HTSC NO.	DETAILS OF OLD METER			DETAILS OF NEW METER		
		METER SL NO	MAKE	DATE OF FAILURE	METER SL. NO	MAKE	DATE OF REPLACEMENT

		04938094 (Check)	ELSTER	19.02.2011			
MCL Udumalpet							
1	U 1311	04804824	ELSTER	06.04.2010	TNB 03943	SECURE	07.4.2010
RST							
1	975	02 373 870	ELSTER	Utility Change	10287902	L & T	26.02.2011
2	977	02 373 869	ELSTER	Utility Change	10287938	L & T	26.02.2011
Sandhya							
1	1044	04 954 012	ELSTER	22.10.2008	04 723 065	ELSTER	22.10.2008
SSM							
1	1540	04 725 715	ELSTER	Utility Change	0840579 (Main) 08040600 (Check)	L&T	23.02.2009
SVSM							
1	1527	04 725 661	ELSTER	Utility Change	0840569 (main) 08040597 (check)	L&T	23.02.2009
TSML							
1	625	02 329 669	ELSTER	Utility Change	10287876	L&T	26.02.2011
2	626	04 863 456	ELSTER	09.08.2010	TNU 04994	SECURE	09.08.2010
3	1041	02 373 988	ELSTER	Utility Change	10287915	L&T	26.02.2011
4	1748	04 804 619	ELSTER	Utility Change	10287856	L&T	26.02.2011
RIL							
1	1525	04725704	ELSTER	3 TOD to 5 TOD	09593368	L & T (Main)	28.02.2011
					09593369	L & T (check)	28.02.2011
2	1526	04725703	ELSTER	Change in Utility	09593348	L & T (Main)	22.07.2010
					09593349	L & T (check)	22.07.2010
RML							
S. NO	HTSC NO	DETAILS OF OLD METER			DETAILS OF NEW METER		
		METER SL NO	MAKE	DATE OF FAILURE	METER SL. NO	MAKE	DATE OF REPLACEM ENT
1	576	02 329 028	ELSTER	Utility Change	10287917	L&T	26.02.2011
2	577	02 329 022	ELSTER	Utility Change	10287909	L&T	26.02.2011
3	944	02 373 974	ELSTER	Utility Change	10287916	L&T	26.02.2011

4	972	02 373 951	ELSTER	Utility Change	10287920	L&T	26.02.2011
5	979	02 373 871	ELSTER	Utility Change	10287930	L&T	26.02.2011
6	980	04 668 107	ELSTER	Utility Change	10287918	L&T	26.02.2011
7	1022	02 377 867	ELSTER	Utility Change	10287870	L&T	26.02.2011
8	1347	04 691 177	ELSTER	Utility Change	10287900	L&T	26.02.2011
9	1348	04 681 410	ELSTER	Utility Change	10287934	L&T	26.02.2011
10	1467	04 719 785	ELSTER	Utility Change	10287904	L&T	26.02.2011
11	1582	04 726 575	ELSTER	Utility Change	08040575 (main) 08040576 (check)	L&T	24.02.2009
12	1691	04 726 621	ELSTER	Utility Change	0840590 (main) 08040604 (check)	L&T	24.02.2009
11	1582	08040575(main) 08040576(check)	L&T	Utility Change	Meter Not Changed		5Slots Program changed on 26.02.2011
12	1691	0840590(main) 08040604(check)	L&T	Utility Change			

* Utility Change

Annex 3

Detailed location of WTG's

HT Sc No.	NO.s and Capacity (KW) of turbine	Make of Turbine	SF No. of Turbine	Location	Latitude	Longitude
D31	1X800	ENERCON	484/1,2	Pushpathur	N10 34 4.981	E77 24 59.852
D69	7X800	ENERCON	125/1A;188/1,2;193/1B;185;177/1B, 1C(P);177/1C(P); 171	Pushpathur	N10 36 5.822, N10 36 1.228, N10 35 7.224, N10 36 8.74, N10 36 1.294, N10 35 1.574, N10 35 44.379	E77 24 2.497, E77 24 20.415, E77 24 33.504, E77 24 33.496, E77 24 45.736, E77 24 48.981, E77 24 45.439
D76	1X800	ENERCON	338	Pushpathur	N10 35 26.614	E77 24 49.969
D77	1X800	ENERCON	347/2B1&2B2	Pushpathur	N10 35 11.947	E77 24 49.427
D97	1X800	ENERCON	702/1A(P)	Pushpathur	N10 36 5.822	E77 24 2.497
D98	1X800	ENERCON	451/1(P)	Pushpathur	N10 35 25.7	E77 27 25.556
D99	1X800	ENERCON	461/1(P),457/1(P)	Pushpathur	N10 35 17.777	E77 27 40.388
D100	1X800	ENERCON	305(P)	Pushpathur	N10 33 22.967	E77 25 31.349
D101	1X800	ENERCON	1/1(P)	Pushpathur	N10 33 32.172	E77 25 10.455
D102	1X800	ENERCON	9	Pushpathur	N10 33 21.471	E77 25 5.923
D122	1X800	ENERCON	228/2A2	Pushpathur	N10 33 47.03	E77 26 6.389
D116	2X800	ENERCON	222, 210/1	Pushpathur	N10 35 55.43, N10 35 52.793	E77 24 59.435, E77 25 12.37
D115	1X800	ENERCON	166/3 & 165/2(P)	Pushpathur	N10 33 48.419	E77 24 31.989
D121	2X800	ENERCON	471(P)SOUTH, 472(P),471(P)NO RTH	Pushpathur	N10 33 2.822, N10 35 18.626	E77 27 16.773, E77 27 10.868
D120	1X800	ENERCON	616/1A(P)	Pushpathur	N10 35 34.50	E77 27 15.17
D119	2X800	ENERCON	649/1C2(P),644(P)	Pushpathur	N10 35 2.105, N10 36 6.094	E77 27 14.39, E77 27 6.084
D118	1X800	ENERCON	665/1A(P)	Pushpathur	N10 39 53.363	E77 27 5.333
D117	1X800	ENERCON	670/1B(P)	Pushpathur	N10 36 33.779	E77 27 5.877
D129	7X800	ENERCON	670/1B(P),347(P), 349(P)SOUTH, 356/4A,3G,5C, 358/1(P)NORTH, 416, 676(P), 675/1(P)	Pushpathur	N10 36 7.969, N10 36 4.638, N10 36 0.462, N10 36 6.492, N10 36 0.692, N10 36 3.355, N10 36 43.574	E77 28 1.439, E77 28 5.537, E77 27 57.231, E77 27 51.525, E77 27 42.812, E77 27 26.820, E77 27 26.244
D134	1X800	ENERCON	44/3A	Pushpathur	N10 35 26.614	E77 24 49.969
D133	1X800	ENERCON	103/1B	Pushpathur	N10 37 1.551	E77 26 33.779
D132	2X800	ENERCON	53/1(P), 54/1(P) & 2(P)	Pushpathur	N10 35 1.947, N10 36 46.863	E77 24 49.427, E77 26 44.245
D140	2X800	ENERCON	69/1B(P), 70/1,3(P)	Pushpathur	N10 36 1.294, N10 35 44.379	E77 24 45.736, E77 24 45.439
D139	2X800	ENERCON	78/5,6(P), 100/1(P),2(P)	Pushpathur	N10 35 1.574, N10 36 41.402	E77 24 48.981, E77 246 31.245
D135	7X800	ENERCON	26/1(P),27/1(P), 12/1B3(P), 148/1,2(P), 144/4(P),	Pushpathur	N10 37 7.098, N10 37 4.643, N10 37 0.434, N10 37 0.151,	E77 26 55.041, E77 26 38.692, E77 26 51.136, E77 26 28.152,

			110/1A(P), 115/1(P), 110/3(P))		N10 37 3.542, N10 37 4.232, N10 36 57.384	E77 26 10.488, E77 26 7.092, E77 26 13.319
D138	2X800	ENERCON	225/2A2,2A3,2A4, 224/1(P), 125/1(P), 2(P0	Pushpathur	N10 36 1.945, N10 37 1.115	E77 25 40.589, E77 25 45.298
D137	1X800	ENERCON	204/2(P) & 126/1(P)	Pushpathur	N10 37 15.869	E77 25 47.388
D136	1X800	ENERCON	199(P)	Pushpathur	N10 37 28.380	E77 25 49.131
U1659	2 X 800	ENERCON	299/2(P) & 302 (P)	Chinnaputhur	N10 44 41.233 N10 44 45.566	E77 27 4.984 E77 27 20.579
U1660	1 X 800	ENERCON	326/1(P),2(P)	Chinnaputhur	N10 44 36.572	E77 27 22.546
U1661	1 X 800	ENERCON	343/1(P),2(P)	Chinnaputhur	N10 44 33.333	E77 27 37.094
U1662	2 X 800	ENERCON	351(P) & 355 (P)	Chinnaputhur	N10 45 6.674 N10 44 56.765	E77 27 45.720 E77 27 44.093
U1663	1 X 800	ENERCON	348(P)	Chinnaputhur	N10 44 48.475	E77 27 43.401
U1665	1X 800	ENERCON	251(P)	Chinnaputhur	N10 44 57.587	E77 26 53.766
U1666	2 X 800	ENERCON	253(P) & 249 (P)	Chinnaputhur	N10 44 44.934 N10 35 25.985	E77 26 49.519 E77 27 1.621
U1674	1X 800	ENERCON	593/1(P),2(P)	Chinnaputhur	N10 43 54.465	E77 27 40.463
D188	1X 800	ENERCON	44/3A	Pushpathur	N10 34 18.166	E77 26 6.043
D189	1X 800	ENERCON	44/2A	Pushpathur	N10 34 11.619	E77 25 50.275
D190	1X 800	ENERCON	220/3(P)	Pushpathur	N10 33 51.293	E77 26 27.268
D192	2X 800	ENERCON	215/2A(P) & 282 /3(P),4(P)	Pushpathur	N10 37 20.162 N10 37 16.934	E77 25 34.926 E77 25 18.984
D194	2X 800	ENERCON	30/2(P) & 29/1(P)	Pushpathur	N10 35 43.582 N10 35 51.989	E77 25 46.626 E77 25 44.884
D195	1X 800	ENERCON	596/2A	Pushpathur	N10 35 42.319	E77 26 40.345
D196	1X 800	ENERCON	476(P),489/1A(P)	Pushpathur	N10 34 56.953	E77 27 7.605
D197	1X 800	ENERCON	32/1(P),2(P)	Pushpathur	N10 34 29.633	E77 26 12.413
D198	1X 800	ENERCON	474/1(B),2(B)(P),4 75/1A,2A(P)	Pushpathur	N10 35 6.405	E77 27 5.247
D199	1X 800	ENERCON	122/3	Pushpathur	N10 34 1.157	E77 25 52.757
D200	2X 800	ENERCON	315,314/1(P) & 578/1,2(P)	Pushpathur	N10 32 56.924 N10 32'47.689	E77 25 20.953 E77 25 24.662
D202	7X 800	ENERCON	605/2B(P),590/1(P), 602(2P),4,558/ 3A,608/1A(P),556/ 1A(P) & 589/1,2,590/2,5, 540/3(P),542/1D(P)	Pushpathur	N10 35'23.163 N10 35 33.536 N10 35'27.210 N10 35 35.875 N10 35 18.480 N10 36 8.740 N10 35 8.099	E77 26 39.733 E77 26 40.276 E77 27 3.111 E77 26 53.249 E77 26 51.993 E77 24 33.496 E77 26 44.085
D203	1X 800	ENERCON	1/1D	Pushpathur	N10 36 9.235	E77 26 34.509
U1459	1X1650	VESTAS	186(P),188/1AA(P))	Udumalpet	N10 35.857	E77 14.145
U1460	1X1650	VESTAS	163/1	Udumalpet	N10 34.498	E 77 11.435
U1464	1X1650	VESTAS	59/3B(P),253/C1(P)	Udumalpet	N10 37.239	E77 12.081
U1465	1X1650	VESTAS	252/B1 C(P),253/C1(P)	Udumalpet	N10 34.844	E77 11.315
U1468	1X1650	VESTAS	446/3,446/4	Udumalpet	N10 37.760	E77 21.854
U1469	1X1650	VESTAS	440/2A,2B	Udumalpet	N10 37.985	E77 21.804

U1522	1X1650	VESTAS	370/1C1 1C2(P)	Udumalpet	N10 38.175	E77 21.520
U1532	1X1650	VESTAS	525/2(P)	Udumalpet	N10 38.559	E77 20.304
U1550	1X1650	VESTAS	340/C(P)	Periapatti	N10 43.603	E77 11.729
U1551	1X1650	VESTAS	357	Periapatti	N10 43.697	E77 11.395
U1552	1X1650	VESTAS	316/1(P)	Periapatti	N10 43.624	E77 10.847
U1553	1X1650	VESTAS	315(P)	Periapatti	N10 43.103	E77 11.059
U1554	1X1650	VESTAS	224/B1C, 224 1A(P),225/DE	Periapatti	N10 43.209	E77 10.711
U1555	1X1650	VESTAS	218	Periapatti	N10 43.457	E77 11.357
U1565	1X1650	VESTAS	118/(P)	Periapatti	N10 43.233	E77 11.343
U1566	1X1650	VESTAS	427/2A(P)	Periapatti	N10 44.323	E77 11.553
U1567	1X1650	VESTAS	379/1(P)	Periapatti	N10 44.544	E77 10.850
U1568	1X1650	VESTAS	284/3A(P), 3B(P)	Periapatti	N10 42.684	E77 11.108
U1569	1X1650	VESTAS	204(P)	Periapatti	N10 39.719	E77 11.786
U1574	1X1650	VESTAS	105/2	Periapatti	N10 39.191	E77 11.745
U1311	1X1650	VESTAS	161/1A3	Thungavi	N10 37.476	E77 18.987
U1310	1X1650	VESTAS	34/2C2(P)	Thungavi	N10 37.644	E77 19.306
1528	1X1650	VESTAS	619/1,2	Uthumalai	N8 58 10.2	E77 32 32.4
1529	1X1650	VESTAS	649/1,2,3,4	Uthumalai	N8 58 01.9	E77 32 52.0
1530	1X1650	VESTAS	641/1,2	Uthumalai	N8 57 43.1	E77 32 46.9
1531	1X1650	VESTAS	664/1,3	Uthumalai	N8 58 08.3	E77 32 13.1
2037	1X1650	VESTAS	233/8A,8B	Anaikulam	N9 00 46.5	E77 28 15.2
2038	1X1650	VESTAS	284/1(P)	Anaikulam	N9 00 22.2	E77 28 18.7
2039	1X1650	VESTAS	64/2(P),65/2E,6,3 C,3B,2G,2D,2B,2 C,3A,4,5,2F,1, 66/3B,2B,5,8C,1A ,1B,2A,3A,4,6,7,8 A,8B	N. Krishna puram	N9 00 27.4	E77 29 34.0
2067	1X1650	VESTAS	99/1,3(P),2(P),103 /11(P)	Kurichampatti	N8 59 27.1	E77 29 48.8
2068	1X1650	VESTAS	83/3,4,5,6	Kurichampatti	N8 59 18.1	E77 29 21.3
2505	1X1650	VESTAS	179/2A,2B,3,4,5,6 ,7,8,9,10A,10B,11 A,11B,11C,12	Vadiyoor	N8 58 097	E77 27 .549
2506	1X1650	VESTAS	58/14A,14B,14C,1 5A,15B,15C,16(P) ,17A,17B,18,21	Rajagopalaperi	N8 57 .193	E77 27 .533
2507	1X1650	VESTAS	324/2A,2B,2C,3,4 A,4B,4C,5,6A,6B	Rajagopalaperi	N8 57 .504	E77 27 .620
2509	1X1650	VESTAS	87/5,6,7,8,9,88/1, 2,3A,3B,4,5,6,7,8 9/14A,14B,15,16, 17,18	Anaikulam	N9 00 06.2	E77 27 24.3
2510	1X1650	VESTAS	36/1,2(P),3(P),4,3 7/2(P),3,4(P),5,6,7 (P)	Vadiyoor	N8 59 02.7	E77 28 06.4
2522	1X1650	VESTAS	196/2B2,3B,3C	Rajagopalaperi	N8 56 .944	E77 27 .823
2616	1X1650	VESTAS	234/5A,5B,5C,5D, 6A,6B,7,8,11A,11 B,11C,236/1A,1B, 2,237/18A,18B	Rajagopalaperi	N8 56 40.7	E77 27 48.0
2629	1X1650	VESTAS	653/1(P),654/1(P), 2	Uthumalai	N8 58 20.3	E77 32 47.7

2357	1X1650	VESTAS	525	Thandayarkulam	N8 19 45.8	E77 37 30.2
2358	1X1650	VESTAS	538	Thandayarkulam	N8 19 19.4	E77 37 38.7
2359	1X1650	VESTAS	529	Thandayarkulam	N8 19 39.6	E77 37 12.8
2360	1X1650	VESTAS	568	Thandayarkulam	N8 19 32.7	E77 37 34.3
2361	1X1650	VESTAS	931	Thandayarkulam	N8 18 45.0	E77 40 06.8
2362	1X1650	VESTAS	754	Thandayarkulam	N8 18 53.6	E77 40 36.3
2367	1X1650	VESTAS	150	Thandayarkulam	N8 18 40.9	E77 39 30.4
2368	1X1650	VESTAS	502	Thandayarkulam	N8 19 55.1	E77 36 59.8
Investor: Thanjavur Spinning Mills Ltd						
625	1X1250	SUZLON	123/5(P)	Dhanakarkulam	N8 14 55.9	E77 38 12.8
626	1X1250	SUZLON	338/4(P)	Dhanakarkulam	N8 14 55.0	E77 38 28.0
1041	1X1250	SUZLON	887/1C(P)	Irukanthurai	N8 12 33.9	E77 39 16.4
1748	1X1250	SUZLON	884/2G(P),2I(P)	Irukanthurai	N8 12 15.1	E77 39 24.3
Investor: Shri Vishnu Shankar Mill Ltd						
587	1X1250	Suzlon	662/2D	Dhanakarkulam	N8 13 13.2	E77 39 46.2
588	1X1250	Suzlon	755/3A1(P)	Dhanakarkulam	N8 12 44.5	E77 39 45.2
974	1X1250	Suzlon	782/1	Dhanakarkulam	N8 12 57.4	E77 39 59.5
976	1X1250	Suzlon	920/3B(P)	Dhanakarkulam	N8 13 11.9	E77 39 00.2
1333	1X1250	Suzlon	54/1C(P)	Irukanthurai	N8 13 28.4	E77 40 45.5
1354	1X1250	Suzlon	858/1B(P) & 857/2B(P)	Dhanakarkulam	N8 13 45.9	E77 40 43.9
1527	1X1650	NEG Micon	142/1(P)	Kavalakuruchi	N8 56 48.8	E77 32 16.3
Investor: Rajapalayam Mills Ltd						
576	1X1250	SUZLON	674/(P)	Dhanakarkulam	N8 13 33.2	E77 39 55.3
577	1X1250	SUZLON	845/1(P)	Dhanakarkulam	N8 13 34.5	E77 40 10.2
944	1X1250	SUZLON	311/2A1,2A2	Irukanthurai	N8 12 48.4	E77 40 17.3
972	1X1250	SUZLON	363/2A(P)	Irukanthurai	N8 12 15.1	E77 39 57.1
979	1X1250	SUZLON	890/4	Dhanakarkulam	N8 13 55.1	E77 40 16.8
980	1X1250	SUZLON	891	Dhanakarkulam	N8 14 04.2	E77 40 13.9
1022	1X1250	SUZLON	837/2	Irukanthurai	N8 12 04.8	E77 38 34.6
1347	1X1250	SUZLON	129/9(P)	Irukanthurai	N8 12 28.8	E77 41 14.4
1348	1X1250	SUZLON	36(P)	Irukanthurai	N8 12 39.5	E77 41 12.4
1467	1X1250	SUZLON	137/3(P)	Irukanthurai	N8 12 21.3	E77 40 59.6
1582	1X1650	NEG Micon	245/2(P)	Uthumalai	N8 58 07.9	E77 31 44.7
1691	1X1650	NEG Micon	249/2(P)	Uthumalai	N8 58 14.9	E77 31 26.9
Investor: Sandhya Spinning Mill Ltd						
631	1X1250	SUZLON	393/3B(P)	Irrukanthurai	N8 11 35.0	E77 39 24.9
632	1X1250	SUZLON	329/4B(P)	Dhanakarkulam	N8 14 57.7	E77 38 43.0
1044	1X350	SUZLON	972/1B(P) & 2B(P)	Irrukanthurai	N8 12 17.7	E77 38 39.4
1422	1X1250	SUZLON	404/2B	Irrukanthurai	N8 11 20.0	E77 39 15.1
1468	1X1250	SUZLON	145/2(P)	Irrukanthurai	N8 12 07.7	E77 40 48.2
Investor: Sudarsanam Spinning Mills						
578	1X1250	Suzlon	851/1B(P)	Dhanakarkulam	N8 13 25.5	E77 40 30.6
579	1X1250	Suzlon	854/1(P)	Dhanakarkulam	N8 13 35.3	E77 40 25.1
926	1X1250	Suzlon	828/2(P)	Dhanakarkulam	N8 13 14.7	E77 40 19.8
1540	1 x 1650	NEG Micon	336/5,6,7A, 7B,8,9,10A,10 B,11A,11B	Uthumalai	N8 57 57.3	E77 32 01.9
Investor: Rajapalayam Textile						
978	1X 1250	SUZLON	879/3C	Dhanakarkulam	N8 14 06.4	E77 40 29.0

Investor: Ramco Industries Ltd						
1383	1 x 1250	Suzlon	483/1(P),2(P)	Irukanthurai	N8 10 34.3	E77 39 05.0
1384	1 x 1250	Suzlon	94/1B(P)	Irukanthurai	N8 12 58.7	E77 40 39.9
468	1 x 1250KW	Suzlon	301/3C (part)	Irukanthurai	N8 12 25.7	E77 40 09.5
630	1 x 1250KW	Suzlon	386/3(p)	Irukanthurai	N8 12 32.1	E77 30 21.9
973	1 x 1250KW	Suzlon	886/3A1	Irukanthurai	N8 12 42.8	E77 39 28.6
1525	1650 kW	NEG MICON	212/2,212/3 & 213/2(P)	Uthumalai	N8 54 47.6	E76 33 16.3
1526	1650 KW	NEG MICON	207/3	Uthumalai	N8 55 46.8	E75 33 16.3
271	1 x 1250KW	Suzlon	320/1(p)	Kallupalayam	N10 55 43.0	E77 04 11.1
510	500	Vestas RRB	1227/6 (part)	Pazhavor	-	-
426	750	NEG MICON	178/2 (part)	Panagudi	-	-
ELP- 27	2 * 800	Enercon	321/P	Gulihosahalli	-	-
H - 31	1500	Suzlon	SN-12	Aidahalli Kaval	-	-
Investor: Rajapalayam Spintext						
975	1X1250	Suzlon	705/3	Dhanakarkulam	N8 13 16.9	E77 38 44.2
977	1X1250	Suzlon	682/1 A, 1A (P)	Dhanakarkulam	N8 13 25.9	E77 39 08.2

Annex 4

Utilization Pattern for all WTGs

HT Sc No.	Utilization		Period of Change in Utilization	Current Status
	(Mentioned in the VCS-PD)	Change in Utilization		
D31	Export	Captive	23.09.2009 – 27.01.2011	Export ⁶
D69	Export	Captive	23.09.2009 – 27.01.2011	Export
D76	Export	Captive	23.09.2009 – 27.01.2011	Export
D77	Export	Captive	23.09.2009 – 27.01.2011	Export
D97	Export	No Change	-	Export
D98	Export	No Change	-	Export
D99	Export	No Change	-	Export
D100	Export	No Change	-	Export
D101	Export	No Change	-	Export
D102	Export	No Change	-	Export
D122	Export	No Change	-	Export
D116	Export	No Change	-	Export
D115	Export	No Change	-	Export
D121	Export	No Change	-	Export
D120	Export	No Change	-	Export
D119	Export	No Change	-	Export
D118	Export	No Change	-	Export
D117	Export	No Change	-	Export
D129	Export	No Change	-	Export
D134	Export	No Change	-	Export
D133	Export	No Change	-	Export
D132	Export	No Change	-	Export
D140	Export	No Change	-	Export
D139	Export	No Change	-	Export
D135	Export	No Change	-	Export
D138	Export	No Change	-	Export
D137	Export	No Change	-	Export
D136	Export	No Change	-	Export
U1459	Export	No Change	-	Export
U1460	Export	No Change	-	Export
U1464	Export	No Change	-	Export
U1465	Export	No Change	-	Export
U1468	Export	No Change	-	Export
U1469	Export	No Change	-	Export
U1522	Export	No Change	-	Export
U1532	Export	No Change	-	Export
U1311	Captive	No Change	-	Captive
U1310	Captive	No Change	-	Captive
1528	Captive	No Change	-	Captive
1529	Captive	No Change	-	Captive
1530	Captive	No Change	-	Captive
1531	Captive	No Change	-	Captive

⁶ The current status of utilization is Captive which is a deviation from the registered PDD. However, this change occurred in July 2011 which is out of the monitoring period hence, not applicable.

2037	Captive	No Change	-	Captive
2038	Captive	No Change	-	Captive
2039	Captive	No Change	-	Captive
2067	Captive	No Change	-	Captive
2068	Captive	No Change	-	Captive
2505	Export	Captive	19.10.2009 – 28.02.2011	Export
2506	Export	Captive	19.10.2009 – 28.02.2011	Export
2507	Export	Captive	19.10.2009 – 28.02.2011	Export
2509	Export	Captive	19.10.2009 – 28.02.2011	Export
2510	Export	Captive	19.10.2009 – 28.02.2011	Export
2522	Export	Captive	19.10.2009 – 28.02.2011	Export
2616	Export	Captive	19.10.2009 – 28.02.2011	Export
2629	Export	Captive	19.10.2009 – 28.02.2011	Export
2357	Export	No Change	-	Export
2358	Export	No Change	-	Export
2359	Export	No Change	-	Export
2360	Export	No Change	-	Export
2361	Export	No Change	-	Export
2362	Export	No Change	-	Export
2367	Export	No Change	-	Export
2368	Export	No Change	-	Export
Thanjavur Spinning Mills Ltd				
625	Captive	No Change	-	Captive
626	Captive	No Change	-	Captive
1041	Captive	No Change	-	Captive
1748	Captive	No Change	-	Captive
Shri Vishnu Shankar Mill Ltd				
587	Captive	No Change	-	Captive
588	Captive	No Change	-	Captive
974	Captive	No Change	-	Captive
976	Captive	No Change	-	Captive
1333	Captive	No Change	-	Captive
1354	Captive	No Change	-	Captive
1527	Captive	No Change	-	Captive
Rajapalayam Mills Ltd				
576	Captive	No Change	-	Captive
577	Captive	No Change	-	Captive
944	Captive	No Change	-	Captive
972	Captive	No Change	-	Captive
979	Captive	No Change	-	Captive
980	Captive	No Change	-	Captive
1022	Captive	No Change	-	Captive
1347	Captive	No Change	-	Captive
1348	Captive	No Change	-	Captive
1467	Captive	No Change	-	Captive
1582	Captive	No Change	-	Captive
1691	Captive	No Change	-	Captive
Sandhya Spinning Mill Ltd				
631	Captive	No Change	-	Captive
632	Captive	No Change	-	Captive
1044	Captive	No Change	-	Captive
1422	Captive	No Change	-	Captive
1468	Captive	No Change	-	Captive

Sudarsanam Spinning Mills				
578	Captive	No Change	-	Captive
579	Captive	No Change	-	Captive
926	Captive	No Change	-	Captive
1540	Captive	No Change	-	Captive
Rajapalayam Textile				
978	Captive	No Change	-	Captive
Ramco Industries Ltd				
1383	Captive	No Change	-	Captive
1384	Captive	No Change	-	Captive
468	Captive	No Change	-	Captive
630	Captive	No Change	-	Captive
973	Captive	No Change	-	Captive
1525	Export	Captive	15/07/2009	Captive
1526	Export	Captive	28/07/2009	Captive
271	Captive	No Change	-	Captive
510	Captive	No Change	-	Captive
426	Captive	No Change	-	Captive
ELP- 27	Export	No Change	-	Export
H - 31	Export	No Change	-	Export
Rajapalayam Spintext				
975	Captive	No Change	-	Captive
977	Captive	No Change	-	Captive