

# 1<sup>ST</sup> MONITORING REPORT OF “16.65 MW VCS BUNDLED WIND POWER PROJECT IN TAMILNADU”



Document Prepared By (Vestas Wind Technology India Pvt. Ltd.)

<b>Project Title</b>	16.65 MW Bundled Wind Power Project in Tamilnadu
<b>Version</b>	02
<b>Date of Issue</b>	14-Sep-11
<b>Project ID</b>	The project is not yet registered in the VCS registry. Hence it is not applicable.
<b>Monitoring Period</b>	March 28, 2006 to December 15, 2008
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## 1 PROJECT DETAILS

### 1.1 Summary Description of Project

This project activity for which M/s Vestas Wind Technology India Private Limited is the project participant, involves a collection of Wind Electric Generators (WEGs) installed by the group. The intent of the Project Activity is to reduce GHG emission and promote sustainable development by use of renewable energy (Wind) for generation of power. The project activity is having wind power generation capacity of 16.65 MW and is promoted by various project participants (PPs). As per the agreement between promoters, Vestas Wind Technology India Private Limited would be the sole transaction entity with the VCS registry.

The following table shows the details of the installed Wind Electric Generators (WEGs) of the project activity:

**Table: 01-Details of Wind Electric Generators and its Location**

Sl. No.	Project Promoter	Capacity (MW)	Date of Commissioning	H.T. SC No.	Location	Connected SS
1	Dollar Apparels I	1.65	30.09.2005	1015	Raghlapavi	Poolankinar S/S
	Dollar Apparels II	1.65	30.09.2005	1016	Raghlapavi	Udmalpettai S/S
	Dollar Apparels 1	0.75	21.03.2005	665	Anthiyoor	Gomangalam S/S
	Dollar Apparels 2	0.75	21.03.2005	667	Anthiyoor	Poolankinar S/S
	Dollar Apparels 3	0.75	21.03.2005	666	Anthiyoor	Poolankinar S/S
	Dollar Apparels 4	0.75	21.03.2005	664	Anthiyoor	Gomangalam S/S
	Dollar Apparels 5	0.75	21.03.2005	668	Anthiyoor	Poolankinar S/S
2	Devi Sea Foods 1	1.65	08.05.2005	782	Anthiyoor	Poolankinar S/S
	Devi Sea Foods 2	1.65	20.07.2006	1283	Raghlapavi	Udmalpettai S/S
3	MCTM Global Investments	0.75	11.05.2006	1913	Surandai, Tenkasi	Surandai S/S
4	Srinivasan Raghavan	0.75	26.09.2005	1414	Veeranam, Tenkasi	Alankulam S/S
5	Thirunavukarasu	0.75	27.09.2005	1420	Veeranam, Tenkasi	
6	Standard Fireworks	1.65	17.01.2006	1545	Veeranam, Tenkasi	
7	Thiagarajar Mills	1.65	26.01.2005	603	Anthiyoor	Anthiyoor S/S
8	Aditya Marine	0.75	26.09.2005	1415	Veeranam, Tenkasi	Alankulam S/S

Raghlapavi and Anthiyoor villages are part of Tirupur District, while Surandai, Veeranam and Tenkasi are in Tirunelveli District of the State of Tamil Nadu. The total ERs achieved in this monitoring period of 28<sup>th</sup> March 2006 till 15<sup>th</sup> December, 2008 is 97,639CO<sub>2</sub>.

## 1.2 Sectoral Scope and Project Type

Sectoral Scope	01-Energy industries (renewable - / non-renewable sources)
Project Type	Type I- Renewable energy projects
Whether the project is a grouped project?	No

## 1.3 Project Proponent

The Carbon Advisory Services of Vestas Wind Technology India Private Limited acts as a facilitator for the project and has entered into contractual agreements with the project participants to carry out the VCS Program on its behalf.

Vestas Wind Technology India Private Limited is a wholly owned subsidiary of Vestas Wind Systems A/S, Denmark. The Carbon Advisory Services of Vestas Wind Technology India Private Limited shall be the single point contact for all communications with the VCS Registry. Vestas Wind Technology India Private Limited shall act as a coordinator for providing all relevant information during this process.

In the following table, the contact information of all project participants is shown.

Organization:	Vestas Wind Technology India Private Limited
Street/P.O.Box:	298, Rajiv Gandhi Salai
Building:	Sholinganallur
City:	Chennai
State/Region:	Tamil Nadu
Postfix/ZIP:	600 119
Country:	India
Telephone:	+91 44 2450 5100
FAX:	+91 44 2450 5101
E-Mail:	<a href="mailto:muraj@vestas.com">muraj@vestas.com</a>
URL:	
Represented by:	
Title:	General Manager
Salutation:	Mr.
Last Name:	Rajaram
Middle Name:	
First Name:	Murali
Department:	Sales
Mobile:	
Direct FAX:	+91 44 2450 5106
Direct tel:	+91 44 2450 5101
Personal E-Mail:	<a href="mailto:muraj@vestas.com">muraj@vestas.com</a>

### 1.4 Other Entities Involved in the Project

No other entity is involved in the project.

### 1.5 Project Start Date

26<sup>th</sup> January 2005 (Which is the earliest commissioning date (HTSC No. 603) in the bundled project activity)

### 1.6 Project Crediting Period

28 March 2006 to 28 March 2016;

10 Years

### 1.7 Project Location

The project is a wind based power generation project of 16.65 MW installed capacity with 15 wind electric generators (WEG) of (9)750 kW and (6)1650 kW erected in and around (10) Udumalpet and (5) Tenkasi. The project site falls within the latitudes N 8°57'16.6" and N 10°37'49.9" and longitudes E 77°10'00.1" and E 77°29'29.9" in the State of Tamilnadu in Southern India.

Figure 01:



**Table: 02: List of project promoters, type of WEG, and commissioning date of the WEG, HTSC numbers and their Latitudes and Longitudes:**

Sl. No.	Project Promoter	Capacity (MW)	Date of Commissioning	H.T. SC No.	Latitude	Longitude
1	Dollar Apparels I	1.65	30.09.2005	1015	10°35'33.1"	77°12'45.3"
	Dollar Apparels II	1.65	30.09.2005	1016	10°35'45.3"	77°13'50.2"
	Dollar Apparels 1	0.75	21.03.2005	665	10°35'39.3"	77°10'00.1"
	Dollar Apparels 2	0.75	21.03.2005	667	10°35'36.8"	77°10'13.0"
	Dollar Apparels 3	0.75	21.03.2005	666	10°35'49.9"	77°10'12.6"
	Dollar Apparels 4	0.75	21.03.2005	664	10°36'14.9"	77°10'08.5"
	Dollar Apparels 5	0.75	21.03.2005	668	10°36'03.3"	77°10'21.7"
2	Devi Sea Foods 1	1.65	08.05.2005	782	10°37'41.2"	77°11'23.1"
	Devi Sea Foods 2	1.65	20.07.2006	1283	10°34'37.2"	77°11'60.1"
3	MCTM Global Investments	0.75	11.05.2006	1913	8°57'16.6"	77°27'05.7"
4	Srinivasan Raghavan	0.75	26.09.2005	1414	8°57'35.8"	77°29'29.9"
5	Thirunavukarasu	0.75	27.09.2005	1420	8°57'23.7"	77°29'15.7"
6	Standard Fireworks	1.65	17.01.2006	1545	8°58'52.5"	77°28'56.5"
7	Thiagarajar Mills	1.65	26.01.2005	603	10°37'19.0"	77°10'52.9"
8	Aditya Marine	0.75	26.09.2005	1415	8°57'30.6"	77°29'16.7"

## 1.8 Title and Reference of Methodology

Methodology: ACM0002 / Version 10 (Valid from 11 Jun 09 to 25 Feb 10)

Title: Consolidated baseline methodology for grid-connected electricity generation from renewable sources

Sectoral Scope: 01

<http://cdm.unfccc.int/UserManagement/FileStorage/NF9EDA0V5K382HW0JR14GS7XYQUMCP>

The methodological tool 'Tool to calculate the emission factor for an electricity system', version 01.1 has been applied.

**Reference:**

[http://cdm.unfccc.int/Reference/tools/ls/meth\\_tool07\\_v01\\_1.pdf](http://cdm.unfccc.int/Reference/tools/ls/meth_tool07_v01_1.pdf)

## 2 IMPLEMENTATION STATUS

## 2.1 Implementation Status of the Project Activity

The first WEG of this project activity was commissioned on 26 January 2005 and the last WEG was commissioned on 20 July 2006. All the WEG are connected to the grid interconnection point and supply the generated electricity to the state electricity board (SEB) through a power purchase agreement. The electricity generated by the WEG are measured in the individual metering points to which the WEG are connected. By virtue of the fact that all the WEGs are in same geographic location and the individual projects supply electricity to the same grid they are bundled as one single Project.

The project involves the installation of WEGs of NEG Micon. The WEGs are ideal for Indian meteorological conditions. WEGs of 750 kW and 1650 kW have been installed. The NM 48/750 WEG with a rated capacity of 750 kW is one of the machines well known for its best performance. The NM 48/750 WEG is a stall regulated machine with a cut-in speed of 4 m/s and a cut-out speed of 25 m/s. The NM 82/1650 with a rated capacity of 1650 kW is an ACTIVE STALL™ machine with cut-in and cut-out speeds of 2.5 m/s and 32 m/s, respectively. The NM 48/750 and NM 82/1650 machines are type tested and certified by DNV, Denmark A/S. The technical specification of the WEGs is as tabulated below:

**Table: 03**

SI No	Parameters	NM 48/750	NM 82/1650
1	Operational Data		
	Nominal Output	750 KW	1650 KW
	Power Regulation	Stall	Active-Stall™
	Cut-In Speed	4 m/s	3.5 m/s
	Cut-Out Speed	25 m/s	24 m/s
2	Rotor		
	Rotor Diameter	48.2 m	82 m
	Rotor Swept Area	1824 cm <sup>2</sup>	5281 m <sup>2</sup>
	Number of Blades	3 nos.	3 nos.
3	Brake System		
	Blade tip Air Brake	Hydraulic, fail safe	Full Blade Pitch
	Disc Brake	Hydraulic	Hydraulic Disc Brake
4	Generator		
	Type	Asynchronous	Asynchronous
	Nominal Voltage	690 V	690 V
	Nominal Frequency	50 Hz	50 Hz
	Name Plate Rating	750/200 KW	1650/900 KW
	Cooling	Closed circuit liquid cooling	Closed circuit liquid cooling
5	Tower		
	Type	Conical, Steel, PU Painted	Tubular, Steel, PU Painted

SI No	Parameters	NM 48/750	NM 82/1650
	Hub Height	According to type approvals	According to approvals
6	Controller		
	Type	Computer controlling	Microprocessor based computer control system
	Capacitor Bank	NO LOAD Compensated	Automatic intelligent phase compensation logic, multistage

No specific events happened. The project activity has been in continuous operation and there have not been any events or situations during this monitoring period which impacts the applicability of the methodology.

## 2.2 Deviations from the Monitoring Plan

Not Applicable. There is no deviation from the validated PD monitoring plan for this monitoring period.

## 2.3 Grouped Project

The project activity is an individual and not a grouped project activity. It involves establishment of a wind power project with the total installed capacity of 16.65 MW

## 3 DATA AND PARAMETERS

### 3.1 Data and Parameters Available at Validation

Data Unit / Parameter:	EF <sub>grid, CM,y</sub>
Data unit:	tCO <sub>2</sub> /MWh
Description:	Emission factor of the southern grid
Source of data:	CO <sub>2</sub> Baseline Database Version dated October 2008 <a href="http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm">http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm</a>
Value applied:	0.92694742
Purpose of the data:	Baseline Emission Calculations
Any comment:	The emission factor (EF <sub>grid, CM,y</sub> ) is fixed and it is same for the entire crediting period



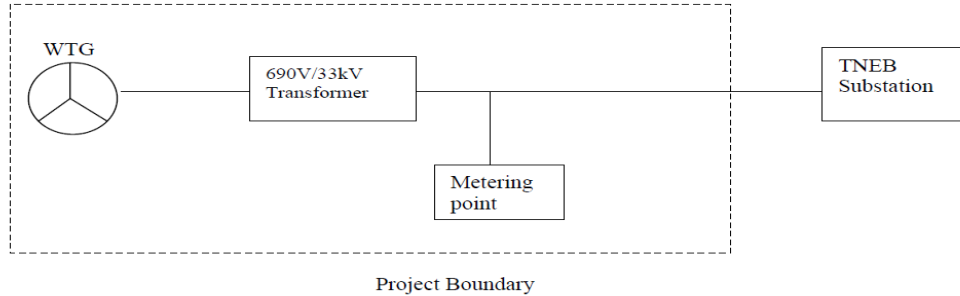
### 3.2 Data and Parameters Monitored

Data Unit / Parameter:	EG <sub>y</sub>
Data unit:	kWh
Description:	Net quantity of electricity supplied to the grid by the project activity during the year y .
Source of data:	Monthly electricity generation statement issued by Tamil Nadu Electricity Board (TNEB)
Description of measurement methods and procedures to be applied:	Calculated
Frequency of monitoring/recording:	Continuous monitoring and Monthly Recording
Value monitored:	105,335,452
Monitoring equipment:	Tri vector Energy meter of accuracy class 0.5 is used for monitoring..The serial number of the energy meters connected to WTGs is provided in Annex 1.
QA/QC procedures to be applied:	The project revenue is based on the net units displaced as measured by main metering system installed at the interconnection point (substation point). The meters used are calibrated periodically by state electricity utility. Sales record to the grid and other records are used to cross check this data and hence ensure consistency.
Calculation method:	Net quantity of electricity supplied = Export of electricity - Import of electricity
Any comment:	The data (electricity exported to the grid) will be archived on electronic media as well as on paper. The data will be kept for two years after the end of the crediting period or the last issuance of VCU's for this project activity, whichever occurs later.

### 3.3 Description of the Monitoring Plan

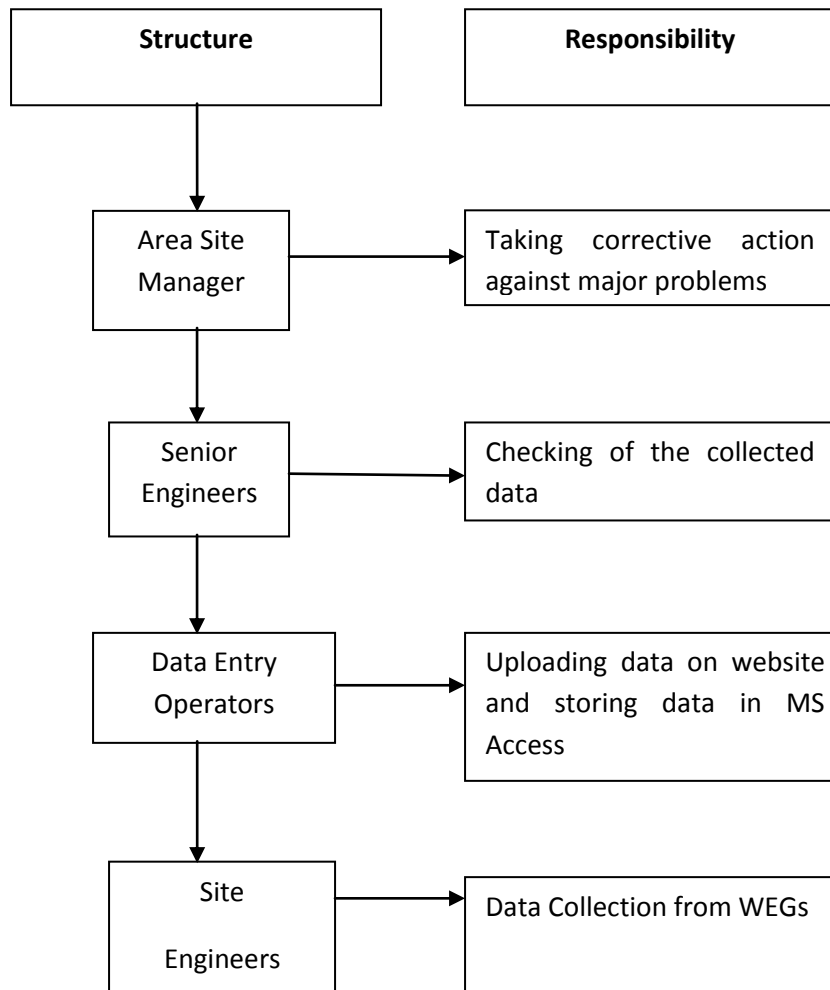
The methodology used is "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" ACM0002/Version10/Sectoral Scope 01 EB 47 (28 May 2009).

**Figure: 02 Schematic Line Diagram showing monitoring point for a Single WTG**



The project proponents have signed an O&M contract with the supplier. The performance of WTG, safety in operation and scheduled/breakdown maintenances are organized and monitored by supplier. The organogram structure of the O&M team with their roles and responsibilities is given below:

**Figure: 03 Organogram Structure of O&M Team:**



#### Metering:

The delivered Energy is metered by the parties (TNEB and the Owner) at the high voltage side of the step up transformer installed at the project site.

#### Daily Meter Reading:

Daily energy meter reading for all WEGs are taken by the maintenance staff, and recorded in the generation log, in a controlled format. The daily readings recorded in the log book are uploaded by the data entry operator in the customer portal, [www.power2customer.com](http://www.power2customer.com). Thus the daily readings are archived both electronically and in paper form.

#### Monthly Meter Reading:

The electronic meters installed at the grid interconnection point by the TNEB are used to measure the electricity supplied to the grid on a monthly basis. Every month these meter readings are recorded by the officers of the TNEB. These records are archived for crosschecking yearly figures. The meters at the grid interconnection point are two-way meters and owned by TNEB. TNEB takes the readings from these meters and the same reading are used to determine the net power exported to the grid and determine the extent of mitigation of GHG over a period of time.

#### Calibration:

Calibration of energy meters are to be done once in three year by TNEB with 0.5 class accuracy. If inaccuracy found more than the allowed error, the meters are changed. The details of which are provided in the calibration table. The metering equipment has sufficient accuracy so that any error resulting from such equipment shall not exceed 0.5% of full-scale rating, which is permissible limits of error for a meter and is said to be the allowed error. The calibration of monitoring equipment is being maintained as per the requirement of TNEB standards. However in the current monitoring period the error has been considered for the delay calibrating period as per the EB guideline EB 52 annex 60 para 4(a) the maximum permissible error of 0.5% based on the accuracy of 0.5 class energy meters were within the limit during latest calibration, hence as a conservative approach maximum permissible error of 0.5 % is considered for the non calibrated period. The date of calibration and delay period details are presented in the Annex 1 and 2 respectively. This is in line with "GUIDELINES FOR ASSESSING COMPLIANCE WITH THE CALIBRATION FREQUENCY REQUIREMENTS Annex: 60, EB52.

#### Measurement Frequency

Frequency of measurement by TNEB - Once in a month

Frequency of measurement by site Operator - Once in a day

Calibration of the Energy Meter - This is carried out by TNEB (Once in three year)

#### Data Collection and Archiving

The monthly data of electricity generation is collected in both log book and electronic form. However, the data in electronic form is archived throughout the life time of the project. The electricity records are maintained regularly by the team at the site.

Hence, the monitoring at the ground level is done by the O & M service providers, which in case of the project activity are the same as the suppliers of the WEGs. Also, as per the contract, a monthly generation report is made available to the WEG owner with gross and net energy generation from the wind electric generators.

During this monitoring period, the project activities were in normal operation except for the routine operational stoppages and downtime for scheduled preventive maintenance.

#### Data uncertainties and adjustments

Data uncertainties and adjustments happens only during the period of meter failures, In case of failure of existing meter, the new meter will be installed within few hours. The WEG will be stopped during the time of meter failure. Hence there is no possibility of Data uncertainties. Also the WEGs are equipped with a micro-processor based Controller (Local Control System) specially designed to control the WEG. The primary function of the LCS is to ensure that all the components of the WEG remain fully operational under all conditions. In order to meet this requirement, it is necessary to monitor wind speed, wind direction, temperature, rotational speeds, electricity generated, voltage etc. The LCS display and keyboard enable control of all WEG functions. The LCS stores all the data and it can be linked to a PC to transfer the data. As LCS is the central control unit there is no calibration required for it and if there is any failure in the internal part of the LCS, the WEG will automatically shut down and will be replaced by a new LCS. In case of TNEB meter fails the LCS reading from Controller are noted both electronically and logged in writing.

## 4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

### 4.1 Baseline Emissions

The project uses ACM0002, version 10 “Grid connected electricity generation from renewable source” has been considered for the purpose of calculating the Emission Reductions.

The baseline emissions are estimated as the product of the electricity generated by the project activity and the ex-ante Emission factor of the regional electricity grid.

The project activity is generation of electricity using wind energy and exporting the same to the Southern grid system. Baseline emissions include only CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The baseline emissions are to be calculated as per equation no 6 of the applied methodology

$$BE_y = EG_y * EF_{grid,CM, y}$$

Where,

$BE_y$  = Baseline Emission in year y (tCO<sub>2</sub>/yr)

$EG_y$  = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr).

$EF_{grid,CM,y}$  = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the baseline emission factor has been calculated Ex-ante based on baseline methodology ACM0002 (Version 10). 'Tool to calculate the emission factor for an electricity system Version 1.1' is used for emission factor calculation.

[http://cdm.unfccc.int/Reference/tools/ls/meth\\_tool07\\_v01\\_1.pdf](http://cdm.unfccc.int/Reference/tools/ls/meth_tool07_v01_1.pdf) .

Source: Central Electricity Authority: CO<sub>2</sub> Baseline Database.  
Version: 4, Dated October 2008

[http://www.cea.nic.in/reports/planning/cdm\\_co2/cdm\\_co2.htm](http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm)

The value for  $EF_{grid,CM,y}$  is taken as 0.92694742 tCO<sub>2</sub>/MWh

The emission factor ( $EF_{grid,CM,y}$ ) is fixed and it is same for the entire crediting period.

$$BE_y = 105,335.452 \text{ MWh} * 0.92694742$$

$$BE_y = 97,639 \text{ tCO}_2$$

## 4.2 Project Emissions

As per applied methodology project emissions for the renewable power project activities is zero .since this project activity is grid connected wind power generation. Hence there is no project emission from the project activity.

$$PE_y = 0 \text{ tCO}_2$$

## 4.3 Leakage

As per applied methodology No leakage emissions are considered. Also the VCS project activity engages neither transferring the energy generating equipment from another activity, nor is the existing equipment transferred to another activity. So the leakage emissions are not applicable and hence not considered.

$$LE_y = 0 \text{ tCO}_2$$

#### 4.4 Summary of GHG Emission Reductions and Removals

As there are no emissions due to the project activity and there are no leakages, the emission reduction is equal to the baseline emission.

Emission reduction by this wind power project as per equation no 11 of the applied methodology is

$$ER_Y = BE_Y - PE_Y$$

$ER_y$  = Emission reduction per year by the project activity tCO<sub>2</sub>/year

$$ER_y = 97,639 - 0$$

$$ER_y = 97,639 \text{ tCO}_2$$

**Table: 04 Year wise Emission reduction achieved by the project activity**

Sl. No.	Period	Net Electricity generation (kWh)	Baseline emission factor tCO <sub>2</sub> /MWh	Net emission reductions
1	28 March 2006 to 31 Dec 2006	32,701,721	0.92694742	30,312
2	1 Jan 2007 to 31 Dec 2007	37,812,774	0.92694742	35,050
3	1 Jan 2008 to 15 Dec 2008	34,820,957	0.92694742	32,277
		<b>105,335,452</b>	<b>Total CERs</b>	<b>97,639</b>

The total emission reduction from the project activity between 28 March 2006 and 15 December 2008 is **97,639** tCO<sub>2</sub>eq

#### 5 ADDITIONAL INFORMATION

##### Comparison between estimated emission reductions and actual emission reductions:

As per the registered PDD, the estimated emission reduction from the project activity is 39,642 tCO<sub>2</sub>eq per annum. The current monitoring period covers 32.06 months across three years 2006, 2007 and 2008. Hence the estimated emission reduction for the current monitoring period is calculated as 105925 tCO<sub>2</sub>eq. The actual emission reduction for the current monitoring period is 97,639 tCO<sub>2</sub>eq.

**Table: 05**

Period of measurement		Estimated emission reduction	Actual emission reduction	Deviation between estimated and actual emission reductions
From	To			

		tCO <sub>2</sub> eq	tCO <sub>2</sub> eq	tCO <sub>2</sub> eq
28/03/2006	15/12/2008	105925	97,639	-7.82%

The actual emission reduction from the project is lesser than the estimated emission reduction by 7.82%. Due to the variation in the wind conditions during peak and lean months we observe the decrease in the actual emission reduction.

**Annexure 2- Calibration Details of the WEG involved in the project activity**

<b>Project Promoter</b>	<b>H.T. SC No.</b>	<b>Meter Make</b>	<b>Meter No.</b>	<b>Date of commissioning</b>	<b>Date of Calibration</b>	<b>Periodical Test on</b>	<b>Meter Changes</b>
Dollar Apparels I	1015	Elster	04 719 896	30.09.2005	30.09.2005	14.11.2011	
Dollar Apparels II	1016	Elster	04 720 097	30.09.2005	30.09.2005	14.11.2011	
Dollar Apparels 1	665	Elster	04 691 252	21.03.2005	21.03.2005	14.11.2011	
Dollar Apparels 2	667	Elster	04 691 254	21.03.2005	21.03.2005	14.11.2011	
Dollar Apparels 3	666	Elster	04 691 250	21.03.2005	21.03.2005	14.11.2011	
Dollar Apparels 4	664	Elster	04 691 253	21.03.2005	21.03.2005	14.11.2011	
Dollar Apparels 5	668	Elster	04 691 251	21.03.2005	21.03.2005	14.11.2011	
Devi Sea Foods 1	782	Elster	04 862 849	08.05.2005	08.05.2005	20.10.2011	
Devi Sea Foods 2	1283	ABB	02 260 753	20.07.2006	20.07.2006	17.10.2011	
MCTM Global Investments	1913	Elster	04 804 705	11.05.2006	11.05.2006	12.04.2008	
		Premier	TNB 04 548		18.06.2010	14.09.2011	Meter change
Srinivasan Raghavan	1414	Elster	04 721 882	26.09.2005	29.06.2005	12.04.2008	
						13.09.2011	
Thirunavukarasu	1420	Elster	04 719 980	27.09.2005	27.09.2005	24.07.2008	
						13.09.2011	
Standard Fireworks	1545	Elster	04 726 541	17.01.2006	17.01.2006	12.08.2008	
		Premier	TNB 04 549		21.05.2010	13.10.2011	Meter Change
Thiagarajar Mills	603	Elster	02 378 013	26.01.2005	26.01.2005	03.09.2011	
Aditya Marine	1415	Elster	04 720 002	26.09.2005	26.09.2005	12.04.2008	
						03.10.2011	



**Annexure 3 -Information about Calibration Delay and period which EB 52 Annex 60 has been considered**

Project Promoter	H.T. SC No.	Date of commissioning	Date of Calibration	Validity of Calibration	Periodical Test on	Period of Delay in Calibration applicable to this monitoring Period (date and month wise)				Remarks	
						Period of Delay		Uncovered calibration period			
						From	To	From	To		
Dollar Apparels I	1015	30.09.2005	30.09.2005	29.09.2008	14.11.2011	29.09.2008	14.11.2011	29.09.2008	15.12.2008	-	
Dollar Apparels II	1016	30.09.2005	30.09.2005	29.09.2008	14.11.2011	29.09.2008	14.11.2011	29.09.2008	15.12.2008	-	
Dollar Apparels 1	665	21.03.2005	21.03.2005	20.03.2008	14.11.2011	20.03.2008	14.11.2011	20.03.2008	15.12.2008	-	
Dollar Apparels 2	667	21.03.2005	21.03.2005	20.03.2008	14.11.2011	20.03.2008	14.11.2011	20.03.2008	15.12.2008	-	
Dollar Apparels 3	666	21.03.2005	21.03.2005	20.03.2008	14.11.2011	20.03.2008	14.11.2011	20.03.2008	15.12.2008	-	
Dollar Apparels 4	664	21.03.2005	21.03.2005	20.03.2008	14.11.2011	20.03.2008	14.11.2011	20.03.2008	15.12.2008	-	
Dollar Apparels 5	668	21.03.2005	21.03.2005	20.03.2008	14.11.2011	20.03.2008	14.11.2011	20.03.2008	15.12.2008	-	
Devi Sea Foods 1	782	08.05.2005	08.05.2005	07.05.2008	20.10.2011	07.05.2008	20.10.2011	07.05.2008	15.12.2008	-	
Devi Sea Foods 2	1283	20.07.2006	20.07.2006	19.07.2009	17.10.2011-	-	-	-	-	-	
MCTM Global Investments	1913	11.05.2006	11.05.2006	10.05.2009		-	-	-	-	-	
			12.04.2008	11.04.2011							
			18.06.2010	17.06.2013	14.09.2011	-	-	-	-	Meter Change	
Srinivasan Raghavan	1414	26.09.2005	29.06.2005	28.06.2008		-	-	-	-	-	
			12.04.2008	11.04.2011	13.09.2011	-	-	-	-	-	
Thirunavukarasu	1420	27.09.2005	27.09.2005	26.09.2008		-	-	-	-	-	
			24.07.2008	23.07.2011	13.09.2011	-	-	-	-	-	
Standard Fireworks	1545	17.01.2006	17.01.2006	16.01.2009	12.08.2008	-	-	-	-	-	
			12.08.2008	11.08.2011							
			21.05.2010	20.05.2013	13.10.2011	-	-	-	-	Meter Change	
Thiagarajar Mills	603	26.01.2005	26.01.2005	25.01.2008	03.09.2011	25.01.2008	03.09.2011	25.01.2008	15.12.2008		
Aditya Marine	1415	26.09.2005	26.09.2005	25.09.2008		-	-	-	-	-	
			12.04.2008	11.04.2011	03.10.2011	-	-	-	-	-	

**Annex- 3 –Net Generation details (year wise) of the WTGs :**

<b>Project Promoter</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Dollar Apparels I	4404800	4605380	3867932
Dollar Apparels II	4206500	4414140	3620717
Dollar Apparels 1	1263890	1422710	1350987
Dollar Apparels 2	1293220	1487680	1486218
Dollar Apparels 3	1351790	1563100	1518784
Dollar Apparels 4	1187840	1370580	1334542
Dollar Apparels 5	1299550	1519650	1457367
Devi Sea Foods 1	3312736	4460616	4155852
Devi Sea Foods 2	1859540	4188480	3264539
MCTM Global Investments	933486	1270524	1372392
Srinivasan Raghavan	1370736	1243188	1270992
Thirunavukarasu	1217436	1141812	1148688
Standard Fireworks	3912930	3871800	3989670
Thiagarajar Mills	3982906	4048044	3702177
Aditya Marine	1104361	1205070	1280100
<b>Total</b>	<b>32701721</b>	<b>37812774</b>	<b>34820957</b>

