

MONITORING REPORT (MR) FOR 2ND PERIODIC VERIFICATION- “8.35 MW WIND POWER PROJECT AT GUDDARANGAVANAHALLI, DISTRICT CHITRADURGA, STATE KARNATAKA IN INDIA”

Document Prepared By - Deloitte Touche Tohmatsu India Pvt. Ltd. (DTTIPL)

Project Title	8.35 MW wind power project at Guddarangavana Halli, District Chitradurga, State Karnataka in India”
Version	Version 5
Date of Issue	27- April-2012
Project ID	349
Monitoring Period	01-April-2009 to 30-September-2011
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1 PROJECT DETAILS

1.1 Summary Description of Project

Having concerns towards sustainable development and offsetting its GHG emissions by generation of power by renewable sources of energy, MSPL Limited (MSPL) and Ramgad Minerals and Mining Limited (RMMPL) had put up 8.35 MW wind based power generation project located in the villages GuddadarangavanaHalli, ChikkappanaHalli and Gonur, in District Chitradurga in the state of Karnataka in India. Wind based power generation project has many environmental benefits including zero particulate matter emissions, no greenhouse gas emissions etc, and thereby subsequently contributes to the global efforts for the mitigation of climate change.

The project activity comprises of installation and operation of eight numbers of 950 kW Wind Electricity Generators (WEGs) and one number of 750 kW WEG having a combined wind power generation capacity of 8.35 MW. The annual estimated power generation for each of the 950 kW WEG is 22,05,330 kWh and for the 750 kW WEG, the same is 17,41,050 kWh as per 26.5% PLF recommended in the applicable Karnataka Electricity Regulatory Commission (KERC) Tariff Order dated 18th January 2005.

The WEGs which are part of the project activity are supplied by Vestas Wind Technology (Formerly NEG Micon), an ISO 9001 certified company. As per the Operation and Maintenance (O&M) Contract between MSPL, RMMPL and Vestas Wind Technology (Vestas), the monitoring of the WEG and furnishing of monthly report of electricity generation shall be the responsibility of Vestas.

Details of wind energy generators (WEGs), connected to the project activity are given in the Table below:

Details of the WEGs installed under the project activity:

S. N. O.	Name of Investor	WEG Capacity (MW)	Unique Identification No. for WEG (Turbine ID.)	WEG Physical Locations	Date of Power Purchase Agreement	Commissioning Date
1	MSPL	0.95 (1x950 kW)	MSPL 1-67456	Guddadarangavan a Halli, Chitradurga district	07.08.2003	21.03.2003
2	MSPL	4.75 (5x950 kW)	MSPL 2- 67903 MSPL 3- 67910 MSPL 4- 67907 MSPL 5- 67904 MSPL 6- 67906	Guddadarangavan a Halli, Chitradurga district	11.02.2004	30.09.2003
3	RMMPL	1.9 (2x950 kW)	Ramgad 1- 67902 Ramgad 2- 67905	Guddadarangavan a Halli & Chikkappana Halli, Chitradurga district	11.02.2004	30.09.2003

4	RMMPL	0.75 (1x750 kW)	Ramgad 3- 68751	Gonur village, Chitradurga district	05.03.2005	19.05.2004
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The project activity is supplying power to Bangalore Electricity Supply Company Limited (BESCOM) under a long term power purchase agreement (PPA).

The project activity is installed in the state of Karnataka, which is under the coverage of the Southern grid, and therefore displaces the power which would have otherwise been generated from the grid, which is heavily reliant on fossil fuels. Thus, the project activity would displace the use of fossil fuels in an amount corresponding to the generation of power produced by the wind energy generators and thus subsequently reduce the GHG emission associated with the combustion of fossil fuels for the power generated from the grid.

1.2 Sectoral Scope and Project Type

The project activity uses one of the baseline and monitoring methodologies approved by the CDM Executive Board.

Project Title	:	8.35 MW wind power project at Guddarangavana Halli, District Chitradurga, State Karnataka in India
Project activity scale	:	Small
Sectoral scope	:	Sector 1- "Grid-connected electricity generation from renewable sources"
Type and Category	:	Approved Small-Scale CDM Methodology Type – I Renewable Energy Projects ¹ Category I-D Renewable Electricity Generation for a grid.
Approved baseline Methodology	:	AMS- I.D. (Version 13)
Approved monitoring methodology	:	AMS- I.D. (Version 13)

¹ Type and category of the project is according to small scale CDM modalities and procedures taken from the UNFCCC website-- <http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf#page=52>

1.3 Project Proponent

Organization:	MSPL Limited
Street/P.O.Box:	Baldota Enclave, Abheraj Baldota Road
Building:	
City:	Hospet
State/Region:	Karnataka
Postfix/ZIP:	583203
Country:	India
Telephone:	+91 8394 232002, 232003
FAX:	+91 8394 232333, 232444
E-Mail:	ajeetkumar@mspllimited.com
URL:	www.mspllimited.com
Represented by:	Mr. Ajeet Kumar Singh
Title:	Deputy General Manager (Power)
Salutation:	Mr.
Last Name:	Singh
Middle Name:	
First Name:	Ajeet Kumar
Department:	
Mobile:	
Direct FAX:	+91 8394 232333, 232444
Direct tel:	+91 8394 232002, 232003
Personal E-Mail:	

1.4 Other Entities Involved in the Project

MSPL Limited (MSPL) and one of its sister companies, Ramgad Minerals and Mining Limited (RMMPL) has set up 9 WEGs for generating power. MSPL Limited (MSPL), the flagship company of the Baldota Group is the project participant in the proposed project. MSPL is acting as a facilitator and Focal point for the proposed project activity.

1.5 Project Start Date

According to the policy announcement dated 10th September 2008 from the VCS Association, the project start date will be considered as the date the project activity began reducing or removing GHG emissions. The first WEG of the proposed VCS project activity was commissioned on 21/03/2003.

1.6 Project Crediting Period

Project crediting period – 01.04.2006 to 31.03.2016

Total No of Years – 10

1.7 Project Location

The project activity is located in the villages GuddadarangavanaHalli, ChikkappanaHalli and Gonur in District Chitradurga in the state of Karnataka in India. The nearest railway station is Chitradurga and there are two airports with Bangalore Airport about 300 km away and the nearest airport being at Hubli about 200 km away.

The geographical co-ordinates of all the WEGs associated to the project activity are provided in the table below:

WEG Location No.	WEG No.	North- Latitude	East-Longitude
MSPL-01	GR-11	14°18'04"	76° 23'39"
MSPL-02	GR-1	14°18'58"	76° 23'30"
MSPL-03	GR-2	14°18'53"	76° 23'33"
MSPL-04	GR-3	14°18'44"	76° 23'34"
MSPL-05	GR-4	14°18'42"	76° 23'34"
MSPL-06	GR-5	14°18'36"	76° 23'34"
Ramgad-01	GR-6	14°18'31"	76° 23'38"
Ramgad-02	GR-17	14°19'38"	76° 22'23"
Ramgad-03	GON-4	14°16'45"	76° 25'07"

1.8 Title and Reference of Methodology

Type – I.D

Title: "Grid Connected renewable electricity generation"

Version number: 13

Scope: 1.

2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

The project activity has already been implemented and all the machines mentioned above have been commissioned and are in operation.

2.2 Deviations from the Monitoring Plan

There are no deviations from the monitoring plan in the project activity and project activity follows the monitoring plan as stated in the registered PD.

2.3 Grouped Project

The project is not a grouped project activity.

3 DATA AND PARAMETERS

3.1 Data and Parameters Available at Validation

Data Unit / Parameter:	W_{OM}
Data unit:	Fraction
Description:	Weight of Operating Margin Emission Factor used for the proposed project activity
Source of data:	Tool to calculate emission factor for an electricity system, Version 02, as per the EB 50, Annex 14
Value applied:	0.75
Purpose of the data:	The data is used for calculating emissions factor.
Any comment:	This is in accordance with the applicable methodology

Data Unit / Parameter:	W_{BM}
Data unit:	Fraction
Description:	Weight of Build Margin Emission Factor used for the proposed project activity
Source of data:	Tool to calculate emission factor for an electricity system, Version 02, as per the EB 50, Annex 14
Value applied:	0.25
Purpose of the data:	The data is used for calculating emissions factor.
Any comment:	This is in accordance with the applicable methodology

Data Unit / Parameter:	EF_{OM}
Data unit:	tCO ₂ /MWh
Description:	Operating Margin Emission Factor for southern grid in year
Source of data:	CO ₂ Baseline Database for the Indian Power Sector", User Guide, Version 4.0 dated October 2008, released by the Central Electricity Authority, Ministry of Power, Government of India
Value applied:	0.999
Purpose of the data:	The data is used for calculating emissions reductions.
Any comment:	

Data Unit / Parameter:	EF_{BM}
Data unit:	tCO ₂ /MWh
Description:	Build Margin Emission Factor for southern grid in year

Source of data:	CO2 Baseline Database for the Indian Power Sector", User Guide, Version 4.0 dated October 2008, released by the Central Electricity Authority, Ministry of Power, Government of India
Value applied:	0.713
Purpose of the data:	The data is used for calculating emissions factor.
Any comment:	

Data Unit / Parameter:	EF _y
Data unit:	tCO ₂ /MWh
Description:	Combined margin CO ₂ emission factor for the proposed project activity
Source of data:	Computed using the following formula $EF_y = W_{OM} * EF_{OM} + W_{BM} * EF_{BM}$
Value applied:	0.9269
Purpose of the data:	The data is used for calculating emissions reductions.
Any comment:	The data is calculated in conjunction with ex ante option of the „Tool to calculate the emission factor for an electricity system“ released as Annex 14 of the EB 50 Report.

3.2 Data and Parameters Monitored

Data Unit / Parameter:	EG _y (Net Electricity supplied to the grid by the WEGs)
Data unit:	kWh
Description:	Net Electricity supplied to the grid by the project
Source of data:	Share Certificate or Form B from BESCOM providing the monthly net electricity generated from project activity and uploaded to Southern grid.
Description of measurement methods and procedures to be applied:	Net electricity supplied to grid will be calculated based on the measured values of “export” and “import” on the meter at the delivery point (at the project site), where joint meter reading is taken by project proponent representative and BESCOM/KPTCL officials. The meter at the final uploading point to grid (at the connected substation) is common to the project activity and other wind turbines in the wind farm that are not under this project activity. The meters at the connected substation records the electricity

	exported and imported by all wind turbines which are part and also not part of the project activity. The joint meter reading at the connected substation is used to estimate the transmission losses from the WEGs. Based on the joint meter reading taken at the project site and the connected substation, BESCOM prepares the Share Certificate or Form B , which indicates the net electricity supplied by the project activity. The reading recorded in this share certificate, issued by BESCOM, will be used to calculate actual GHG emission reductions by the project activity. The data relevant to establishing the net electricity generated from the project activity including the share certificate from BESCOM and the invoice to BESCOM shall be archived for entire crediting period plus two years.
Frequency of monitoring/recording:	Monthly
Value monitored:	51,028,770 kWh
Monitoring equipment:	Main and check meters
QA/QC procedures to be applied:	The measurement of the electricity generated using an electronic meter as installed at the project site (i.e. nearby the WEG) and at the connected substation is considered to be a reliable method for measurement of electricity generated. The additional meters installed at the substation (i.e. grid interconnection point) will be used to measure the mentioned variable on a continuous basis and shall act as a cross check. Every month these meter readings will be recorded by site in-charge and the state utility personnel and the records will be archived for crosschecking yearly figures. The meters at the project site as well as at the connected substation will be tri-vector meters. The readings in these meters may be used to determine the net electricity supplied to the grid by the project activity and determine the extent of mitigation of GHG over a period of time. Calibration of the energy meters being used will be carried out annually as per the standard practice. Data archiving shall be carried out in electronic format during the crediting period and for a time period of two years greater than the total duration of the crediting period of the project activity to enable monitoring of the net electricity supplied to the grid. All these activities shall be carried out by

	trained personnel of Vestas Wind Technology that is an ISO 9001 certified company. Thus, all QA / QC procedures applicable shall be followed. The data records shall also be maintained as specified in the quality standard.
Calculation method:	--
Any comment:	The accuracy class of the metering equipment shall be 0.2% (both main and check meters) as also mentioned in the Power Purchase Agreement.

3.3 Description of the Monitoring Plan

As per the requirements of the methodology, monitoring shall consist of metering the electricity generated by the renewable technology. The project activity leads to mitigation of GHG due to the substitution of fossil fuel generated power in the baseline with zero GHG emitting wind based power project. The monitoring of the emission reduction will be carried out by measuring the net electricity supplied to the grid by the project activity with the help of electronic tri-vector meters installed at project site for each/group of WEGs as well as at the connected substation.

The project activity has been implemented by MSPL Limited and RMML. The WEGs installed in the project activity have been supplied by M/s Vestas Wind Technology India Pvt. Ltd (earlier known as M/s NEG Micon India Pvt. Ltd.). The project activity is operated and managed by Vestas only. An Operations and Maintenance (O&M) Agreement has been signed with Vestas for that purpose. Vestas has adequate and technically qualified professional to ensure constant monitoring of the installed wind electricity generators.

The project activity will be looked after by the manager responsible for operation of the wind energy generating machines at the project site. Daily operations of the wind energy generating machines will be carried out by the staff responsible for the operation of the WEGs.

The meters used for recording the export and import of the electricity generated by each/group of WEGs associated to the project activity are electronic tri-vector meters. The electricity generated by the project activity is recorded on a daily basis. The data will be captured and stored electronically, wherever possible. As a separate measure, the same data will be entered in the log book on change of every shift in a day. Continuous monitoring, hourly measurement and monthly recording of data are carried out during the monitoring period.

The electricity generation from the project activity would be monitored at four metering points with meter IDs: GRHP-02, GRHP-03, GRHP-04, and GRHP-13. Each of the four metering points consists of a main energy meter and a check energy meter. Metering equipments are electronic tri-vector meters with accuracy class of 0.2. The individual WEGs are connected to the metering points as follows:

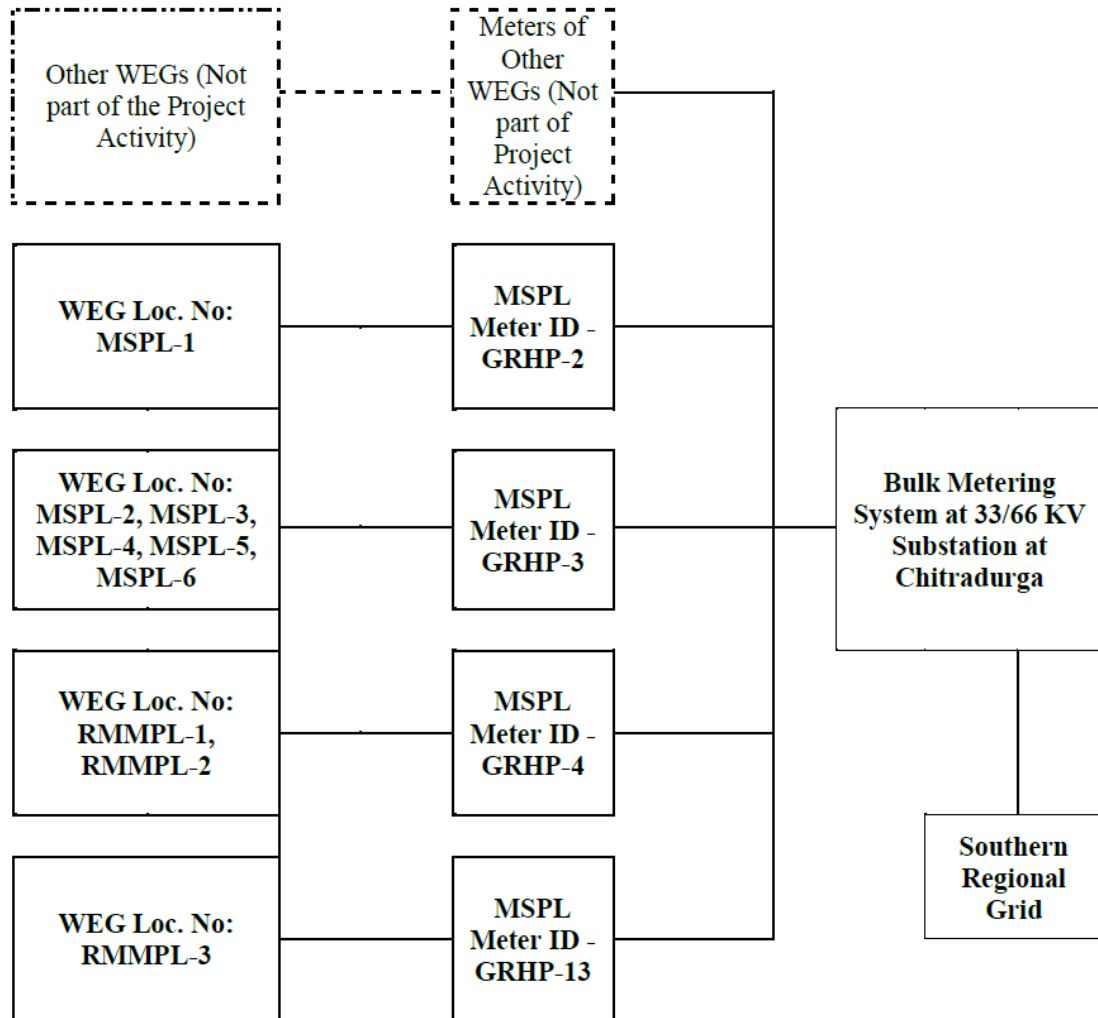
Project Promoter	Meter ID / RR No.	WEG Location Number(s)
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MSPL Limited (Phase 1)	GRHP-02	MSPL-1
MSPL Limited (Phase 2)	GRHP-03	MSPL-2, MSPL-3, MSPL-4, MSPL-5 & MSPL-6
RMM P Limited (Phase 1)	GRHP-04	RMMPL-1 & RMMPL-2
RMM P Limited (Phase 2)	GRHP-13	RMMPL-3

The net electricity supplied to grid will be calculated based on the measured values of “export” and “import” on the meter at the delivery point (i.e. at the project site), where joint reading is taken by project proponent representative and BESCOM/KPTCL officials. The meter at the final uploading point to grid (at the connected substation) is common to the project activity and other wind turbines in the wind farm that are not under this project activity. The meters at the connected substation records the electricity exported and imported by all wind turbines which are part and also not part of the project activity. The joint meter reading at the connected substation is used to estimate the transmission losses from the WEGs. Based on the joint meter reading taken at the project site and the connected substation, BESCOM prepares the Share Certificate, which indicates the net electricity supplied by the project activity. It is to be noted that the apportioning procedure for arriving at the net electricity supplied by the project activity to the grid (as indicated in the Share Certificate issued by BESCOM) are under the control of BESCOM/KPTCL. The reading (i.e. net electricity supplied to grid) recorded in the said share certificate, issued by BESCOM, will be used to calculate actual GHG emission reductions by the project activity.

Metering Arrangement:

Schematic diagram of the metering arrangement at the project site as well as at the connected substation is provided below:



Details of meters installed at project site as well as at the substation are set out in the table below:

Meter ID / RR No.	Name of Investor and Capacity (MW)	Calibration Frequency	Main Meter			Check Meter			Gap In Calibration
			Meter No	Calibration Date	Next due date	Meter No	Calibration Date	Next due date	
GRHP-02	MSPL (0.95 MW)	1st Calibration	2260379	02/07/2008	02/07/2009	2307545	02/07/2008	02/07/2009	None
		2nd Calibration		03/05/2009	03/05/2010		03/05/2009	03/05/2010	None
		3rd Calibration	9141531*	06/07/2009	06/07/2010		06/07/2009	06/07/2010	None
		4th Calibration		23/10/2009	23/10/2010		23/10/2009	23/10/2010	None
		5th Calibration		31/12/2009	31/12/2010		31/12/2009	31/12/2010	None
		6th Calibration		29/11/2010	29/11/2011		29/11/2010	29/11/2011	None
		7th Calibration		11/02/2011	11/02/2012		11/02/2011	11/02/2012	None
GRHP-03	MSPL (4.75 MW)	1st Calibration	2312419	02/07/2008	02/07/2009	02312420	02/07/2008	02/07/2009	None
		2nd Calibration		15/05/2009	15/05/2010		15/05/2009	15/05/2010	None
		3rd Calibration		21/07/2010	21/07/2011		21/07/2010	21/07/2011	67 Days
		4th Calibration		12/11/2010	12/11/2011	09142239*	12/11/2010	12/11/2011	None
		5th Calibration		07/02/2011	07/02/2012		07/02/2011	07/02/2012	None
GRHP-04	RMMPL (1.9MW)	1st Calibration	2312418	02/07/2008	02/07/2009	2312417	02/07/2008	02/07/2009	None
		2nd Calibration		15/05/2009	15/05/2010		15/05/2009	15/05/2010	None
		3rd Calibration		21/07/2010	21/07/2011		21/07/2010	21/07/2011	67 Days
		4th Calibration		11/02/2011	11/02/2012		11/02/2011	11/02/2012	None
GRHP-13	RMMPL (0.75MW)	1st Calibration	4186295	02/07/2008	02/07/2009	4186298	02/07/2008	02/07/2009	None
		2nd Calibration		21/04/2009	21/04/2010		21/04/2009	21/04/2010	None

	Calibration								
	3rd Calibration	24/07/2010	24/07/2011	24/07/2010	24/07/2011	24/07/2011	24/07/2011	94 Days	
	4th Calibration	08/02/2011	08/02/2012	08/02/2011	08/02/2012	08/02/2012	08/02/2012	None	

* At this particular calibration date meter was replaced.

There were some calibration gaps identified in the calibration schedule. The same gap with the days has been mentioned in the table above.

Quality control and Quality Assurance procedures / Calibration Procedures:

Four numbers of main meters and check meters are installed for monitoring the energy exported and imported by the project activity. Each meter is jointly inspected and sealed by both parties (project proponent or its authorized representative and BESCO/KPTCL) and are not interfered with by either of the party except in the presence of the other party or its accredited representatives. The main and check meters shall be tested for accuracy every calendar year with reference to a portable standard meter. The meters shall be deemed to be working satisfactorily if the errors are within specifications for meters of 0.2% accuracy class. The data registered by the main meter alone will be adopted for the purpose of calculation as long as the error in the main meter is within permissible limits. If during the annual accuracy tests, the main meter is found to be within the permissible limit of error and the corresponding check meter is beyond the limits, the main meter reading shall be considered as usual. However, the check meter shall be calibrated immediately. If the main meter is found to be beyond the permissible limits of error, but corresponding check meter is within limits, then the check meter reading shall be adopted for that period. The main meter shall be calibrated immediately.

The monitoring, measurement, reporting and training of monitoring personnel shall be conducted by Vestas Wind Technology as defined in the Operation and Maintenance agreement between MSPL & Vestas and RMML & Vestas and the metering records shall also be maintained by personnel of MSPL Limited and BESCO as defined in the PPAs.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

As per the applicable methodology AMS I.D. (Version 13), the emission in the baseline scenario for the project activity will be determined using the following formula:

$$BE_y = E_{Gy} \times EF_{BL}$$

Where

BE_y = Baseline emissions (in tCO₂e)

EF_{BL} = Baseline Emissions Factor in tCO₂/MWh

E_{Gy} = Net electricity supplied by the project activity to the grid in MWh

Baseline emission factor (EF_{BL}):

The emission factor for the Southern grid has been calculated ex ante as 0.9269 tCO₂/MWh and does not require monitoring.

There were some calibration gaps identified in the calibration schedule. The gaps in calibration schedule are listed below

Meter ID / RR No.	Name of Investor and Capacity (MW)	Delay in Calibration frequency	Due Date	Actual Calibration Done	Calibration Gap	Adjustment of maximum permissible error applied for the months - because of Calibration Gap
GRHP-03	MSPL (4.75 MW)	3 rd Calibration	15/05/2010	21/07/2010	67	May 2010 June 2010 July 2010
GRHP-04	RMMPL (1.9MW)	3 rd Calibration	15/05/2010	21/07/2010	67	May 2010 June 2010 July 2010
GRHP-13	RMMPL (0.75MW)	3 rd Calibration	21/04/2010	24/07/2010	94	April 2010 May 2010 June 2010 July 2010

Net electricity supplied to the grid by the project activity is set out as per the table below. Readings in the table include the adjustments in readings due to gap in calibration as mentioned above in the table.

Generation Month	Monthly Generation in kWh (Net electricity supplied to grid)				
	MSPL (1 x 950 kW)	MSPL (5 x 950 kW)	RMMPL (2 x 950 kW)	RMMPL (1 x 750 kW)	Project activity (8.35 MW)
Apr-09	95,617.00	732,479	202,996	117,564	1,148,656
May-09	171,763.00	1,156,816	313,865	202,929	1,845,373
Jun-09	240,231.00	1,397,294	425,458	243,732	2,306,715
Jul-09	455,281.00	2,459,128	828,393	381,552	4,124,354
Aug-09	268,621.00	1,503,953	449,093	235,973	2,457,640

Sep-09	177,444.00	1,168,958	335,479	186,409	1,868,290
Oct-09	151,509.00	936,214	292,942	135,110	1,515,775
Nov-09	126,033.00	823,098	267,588	101,476	1,318,195
Dec-09	148,902.00	942,604	286,783	107,560	1,485,849
Jan-10	111,100.00	766,587	231,811	81,562	1,191,060
Feb-10	53,919.00	431,872	136,774	59,383	681,948
Mar-10	74,451.00	566,300	161,253	86,948	888,952
Apr-10	66,412.00	439,263	114,975	75,328	695,978
May-10	168,371.00	972,892	309,958	191,580	1,642,801
Jun-10	271,438.00	1,484,501	483,205	243,498	2,482,642
Jul-10	325,988.00	1,667,180	552,754	272,979	2,818,901
Aug-10	269,942.00	1,543,087	452,181	239,423	2,504,633
Sep-10	171,411.00	1,041,199	313,255	166,903	1,692,768
Oct-10	114,961.00	768,132	194,032	119,841	1,196,966
Nov-10	90,213.00	599,170	191,319	68,333	949,035
Dec-10	113,349.00	732,068	216,496	85,727	1,147,640
Jan-11	124,497.00	753,598	248,764	96,333	1,223,192
Feb-11	103,916.00	684,909	217,586	89,910	1,096,321
Mar-11	97,394.00	591,505	198,566	88,344	975,809
Apr-11	51,061.00	374,630	103,747	70,840	600,278
May-11	372.00	1,092,667	312,616	186,579	1,592,234
Jun-11	0.00	2,050,422	673,073	318,905	3,042,400
Jul-11	0.00	1,855,196	754,694	342,722	2,952,612
Aug-11	0.00	1,277,509	601,357	289,609	2,168,475

Sep-11	0.00	721,615	462,612	229,051	1,413,278
Total	4,044,196	31,534,846	10,333,625	5,116,103	51,028,770

Net electricity supplied to the grid (EGy) for the period from 01 April 2009 to 30 September 2011 after incorporating the adjustments due to calibration gap is **51,028,770 kWh**.

4.2 Project Emissions

Being a renewable and clean energy project, the project emissions (PEy) during operation are considered zero.

4.3 Leakage

Leakage emissions due to project activity are zero.

4.4 Summary of GHG Emission Reductions and Removals

The emission reductions from the project activity are calculated as:

$$\text{Emission Reductions (y)} = \text{BEy} - \text{PEy} - \text{LEy}$$

where

PEy = zero

LEy = Project Leakage = Zero

and BEy = EGy x EF_{BL}.

Net electricity supplied to the grid (EGy) for the period from 01 September 2009 to 30 September 2011 is **51,028,770 kWh**.

Accordingly:

Emission Reduction (ERy) calculation for the period from **01 September 2009 to 30 September 2011**:

$$\begin{aligned} \text{ER}_{01 \text{ April } 2009 - 30 \text{ September } 2011} &= 51,028,770 \text{ (kWh)} * 0.9269 \text{ (tCO}_2\text{/MWh)} \\ &= 51,028,770 / 1000 \text{ (MWh)} * 0.9269 \text{ (tCO}_2\text{/MWh)} \\ &= \mathbf{47,297 \text{ tCO}_2} \end{aligned}$$

Vintage Wise emission reductions:

Parameter	Units	Calendar year wise vintage of emission reductions for the complete monitoring period			Total
		1/04/2009 to 31/12/2009	1/1/2010 to 31/12/2010	1/1/2011 to 30/09/2011	
Net Electricity Supplied to the Grid by the Project Activity (EGy)	kWh	18,070,847	17,893,324	15,064,599	51,028,770
Baseline Emission Factor (EFy)	tCO ₂ /MWh	0.9269	0.9269	0.9269	0.9269
Emission Reductions (ERy)	tCO ₂ e	16,749	16,585	13,963	47,297

5 ADDITIONAL INFORMATION

Not Applicable