

**MONITORING REPORT FORM (F-CDM-MR)**
Version 02.0**MONITORING REPORT**

Title of the project activity	Wind Power Project By Sargam Retails Pvt. Ltd. in Gujarat, India
Reference number of the project activity	3724
Version number of the monitoring report	01
Completion date of the monitoring report	27/09/2012
Registration date of the project activity	11/11/2010
Monitoring period number and duration of this monitoring period	Monitoring Period No: 01 Duration of Monitoring Period: 11/11/2010 to 31/07/2012
Project participant(s)	Sargam Retails Private Limited (SRPL)
Host Party(ies)	Government of India, Ministry of Environment and Forests (MoEF)
Sectoral scope(s) and applied methodology(ies)	Sectoral Scope: 01 Energy Industries (renewable /non renewable sources) Applied Methodology: AMS I. D
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	27,840
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	26,999

**SECTION A. Description of project activity****A.1. Purpose and general description of project activity**

This is the first Monitoring Report of the CDM project activity titled “Wind Power Project By Sargam Retails Pvt. Ltd. in Gujarat, India” covering period 11/11/2010 to 31/07/2012 (both days included).

a. Purpose of the project activity & the measures taken to reduce green house gas emissions:

The main purpose of the project activity is to generate electrical energy through sustainable means using wind power resources, to utilize the generated output for supply to Gujarat Electricity Distribution Authority i.e. Gujarat Electricity Transmission Corporation Limited (GETCO) and to contribute to climate change mitigation efforts

b. Brief description of the installed technology and equipment:

The project activity leads to the installation of 12 Wind Energy Convertors (WECs) of installed capacity of 800 KW each with a total generating capacity of 9.6 MW. The WTGs are located in Jamnagar & Rajkot districts of Gujarat state of India.

c. Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.):

The Project has been completed as planned and described in the registered Project Design Document (PDD), Version 02 and dated 04/12/2009.

The start date of the operation of the project activity is 15/09/2009, which is the earliest date of commissioning of the wind mill of the project activity and 16/09/2009 which is date of the commissioning of the last WTG of the project activity.

The commissioning dates of the WTGs installed in the project activity have been provided in the table below:

Capacity	WTG Location Numbers	Commissioning Dates
0.8 MW x 05 Nos	969 ,970,971,972,,973	15/09/2009
0.8 MW x 06 Nos	2047,2082,2083,2084,2119,2120	15/09/2009
0.8 MW x 01 Nos	2118	16/09/2009

d. Total GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period.

The total emission reduction achieved during this current monitoring period (11/11/2010 to 31/07/2012) is 26,999 tCO₂e.

A.2. Location of project activity

The project activity is located in the districts of Jamnagar and Rajkot in the state of Gujarat.

Jamnagar:

Latitude: 22.0819 N

Longitude: 70.1975 E

Rajkot:

Latitude: 22.2973 N

Longitude: 70.7984 E

Latitude & Longitude:



Sr. No.	Location No.	WTG Type	Tower Height	Type of Land	Village
1	969	E-53	75 Mtr. Concrete Tower	Revenue	Juna Matravad
2	970	E-53	75 Mtr. Concrete Tower	Revenue	Juna Matravad
3	971	E-53	75 Mtr. Concrete Tower	Revenue	Khijdiya
4	972	E-53	75 Mtr. Concrete Tower	Revenue	Khijdiya
5	973	E-53	75 Mtr. Concrete Tower	Revenue	Khijdiya
6	2047	E-53	75 Mtr. Concrete Tower	Private	Mota Panchdevda
7	2082	E-53	75 Mtr. Concrete Tower	Private	Mota Panchdevda
8	2083	E-53	75 Mtr. Concrete Tower	Private	Mota Panchdevda
9	2084	E-53	75 Mtr. Concrete Tower	Private	Mota Panchdevda
10	2118	E-53	75 Mtr. Concrete Tower	Private	Chhatar
11	2119	E-53	75 Mtr. Concrete Tower	Private	Chhatar
12	2120	E-53	75 Mtr. Concrete Tower	Private	Chhatar

Location No.	Taluka	District	Latitude (Degree, Min., Sec.)	Longitude (Degree, Min., Sec.)
969	Jamkandorna	Rajkot	N21 59 57.5	E70 18 08.1
970	Jamkandorna	Rajkot	N21 59 50.3	E70 18 08.4
971	Jamkandorna	Rajkot	N21 58 53.7	E70 18 45.1
972	Jamkandorna	Rajkot	N21 58 49.2	E70 18 51.3
973	Jamkandorna	Rajkot	N21 58 42.3	E70 18 43.1
2047	Kalavad	Jamnagar	N22 05 58.6	E70 12 09.7
2082	Kalavad	Jamnagar	N22 06 05.8	E70 12 57.7
2083	Kalavad	Jamnagar	N22 05 55.6	E70 12 56.2
2084	Kalavad	Jamnagar	N22 05 46.8	E70 12 58.8
2118	Kalavad	Jamnagar	N22 05 49.5	E70 12 03.8
2119	Kalavad	Jamnagar	N22 06 40.1	E70 13 34.8
2120	Kalavad	Jamnagar	N22 06 20.1	E70 13 35.3

**A.3. Parties and project participant(s)**

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Government of India, Ministry of Environment and Forests (MoEF) (Host)	Private Entity: Sargam Retails Private Limited (SRPL)	No

A.4. Reference of applied methodology

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The project activity has applied following baseline and monitoring methodology

Title: AMS – I.D – Grid connected renewable electricity generation

Type: I – Renewable Energy project

Version: 15

The MR also refers to “Tool to calculate the emission factor for an electricity system”, Version 02, EB 50.

A.5. Crediting period of project activity

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This project activity has considered renewable crediting period of 21 (7 x 3) years. The start date of the crediting period is from the date of registration viz 11/11/2010 and the length of the first crediting period is 7 years 00 months viz 10/11/2017.

SECTION B. Implementation of project activity**B.1. Description of implemented registered project activity**

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a. Description of the installed technology, technical processes and equipments

The project activity leads to the installation of 12 Wind Energy Convertors (WECs) of installed capacity of 800 KW each with a total generating capacity of 9.6 MW. The WTGs are located in Jamnagar & Rajkot districts of Gujarat state of India.

b. Information on the implementation and actual operation of the project activity, including relevant dates (e.g. construction, commissioning, continued operation periods, etc.).

The Project has been completed as planned and described in the registered Project Design Document (PDD), Version 02 and dated 04/12/2009.

The start date of the operation of the project activity is 15/09/2009, which is the earliest date of commissioning of the wind mill of the project activity and 16/09/2009 which is date of the commissioning of the last WTG of the project activity.

The commissioning dates of the WTGs installed in the project activity have been provided in the table below:

Capacity	WTG Location Numbers	Commissioning Dates
0.8 MW x 05 Nos	969 ,970,971,972,,973	15/09/2009
0.8 MW x 06 Nos	2047,2082,2083,2084,2119,2120	15/09/2009
0.8 MW x 01 Nos	2118	16/09/2009

c. The events or situations that occurred during the monitoring period that may impact the applicability of the applied methodology

No events /situation occurred during the current monitoring period which may have affected the applicability of methodology.

B.2. Post registration changes**B.2.1. Temporary deviations from registered monitoring plan or applied methodology**

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All the deviations that arose have been addressed in the revised monitoring plan as indicated in section B.2.3.

B.2.2. Corrections

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All the corrections have been addressed in the revised monitoring plan as indicated in section B.2.3.

B.2.3. Permanent changes from registered monitoring plan or applied methodology

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The monitoring plan has been revised by the PP for improving the accuracy and completeness of the monitoring system. The revised monitoring plan was approved by the CDM EB on 09/05/2012.

B.2.4. Changes to project design of registered project activity

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There has been no change in the project design.

B.2.5. Changes to start date of crediting period

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Not Applicable

B.2.6. Types of changes specific to afforestation or reforestation project activity

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Not Applicable

SECTION C. Description of monitoring system

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The project activity is in accordance with approved small scale methodology AMS I.D, and therefore, can use the monitoring methodology for type I.D of ‘Appendix B of the simplified M&P for small-scale CDM project activities-Version 15, - Grid connected renewable electricity generation.

This approved monitoring methodology requires monitoring of the following:

- ✓ Net Electricity supplied by the project activity to the grid

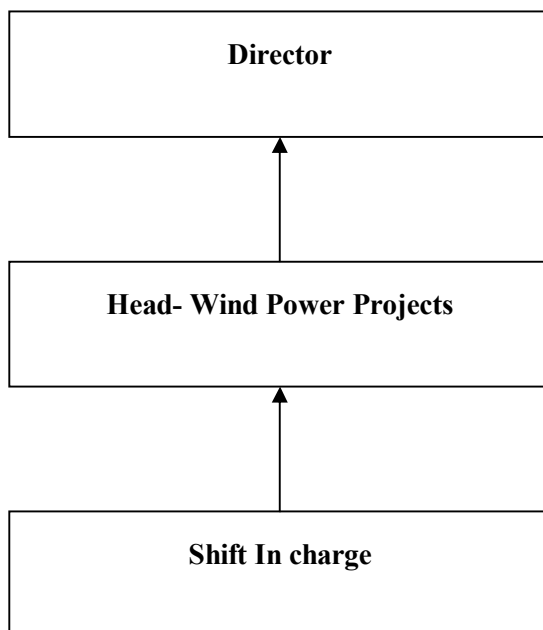
In order to monitor the mitigation of GHG due to the project activity, the Net Electricity supplied by the project activity to the grid needs to be monitored. The net energy supplied by the project activity to the grid multiplied by grid emission factor for regional grid, would result in the baseline emission for the project activity.

Since the emission factor (combined margin) of the grid is fixed for the crediting period, the monitoring of grid emission factor is not required.

The Project is operated and managed by M/s. Enercon (India) Limited/ Its Group Companies/Contractor specifically appointed by Enercon. The operational and management structure implemented by the project participant in order to monitor emission reductions has been provided below.

Net electricity supplied by the project activity to grid is the most important parameter required for the financial reporting and sustainability of the project and monitored with due care by both the parties (O&M Contractor (PP’s representative and representative of GETCO/ GEDA/ SLDC/ Authorized representative).

The authority and responsibility of project management as well as registration, monitoring, measurement and reporting lies with SRPL and it has formulated a Project Team to ensure proper and continuous monitoring of the performance of turbines and generation of power. The same has been outlined as follows:



Roles and responsibilities:

Director: In the project management structure Director is responsible for the overall project performance. The Director reviews the monthly net electricity supplied and annual emission reduction calculations.

Operation and maintenance of wind generators is done by Enercon India Limited/Its Group Companies/Contractor specifically appointed by Enercon.

Head- Wind Power Projects: Head Wind Power Project is assisting to director for completing the task discussed above. He is responsible for the electricity generations at the individual wind turbine installations. He reports to Director for any abnormality.

Shift In-charge: Shift in charge is responsible for recording the electricity meter reading in the GETCO meter. He is the person of Enercon India Limited/Its Group Companies/Contractor specifically appointed by Enercon.

Record Handling: OEM contractors (i.e Enercon India Limited/Its Group Companies/Contractor specifically appointed by Enercon) are responsible for daily records with all the related parameters. The relevant records are submitted to Head- Wind Power Projects on monthly basis. The Head- Wind Power project has final responsibility for record keeping.

The O&M personnel are qualified engineers and are trained by Enercon India Limited for operating and ensuring best performance of the WTGs. The general conditions set out for metering, recording, meter readings, meter inspections, Test & Checking and communication is as per the PPA (power purchase agreement) with GUVNL.

Description of calibration of WTG Controller: The controller used for the WTG is SCS Controller is a micro-processor based intelligent controller which has been specially designed for control of wind turbines. It uses a Woodward Multi function Relay that has three current inputs from CT and three direct voltage inputs (690 Volts). The analog values of current / voltage is converted into digital signal internally using A/D Converters at very high sampling rate. A software program reads these values and displays instantaneous parameters such as voltage, current, power factor, kVAh, kVArh and kWh. These instantaneous values are then time integrated and displayed / stored. Woodward relay is having no display and needs special protocol to view energy readings as this relay is communicating digital signal through special communication protocol. Moreover, turbine cannot run without this relay hence it cannot be removed for calibration, hence, it is not possible to calibrate¹.

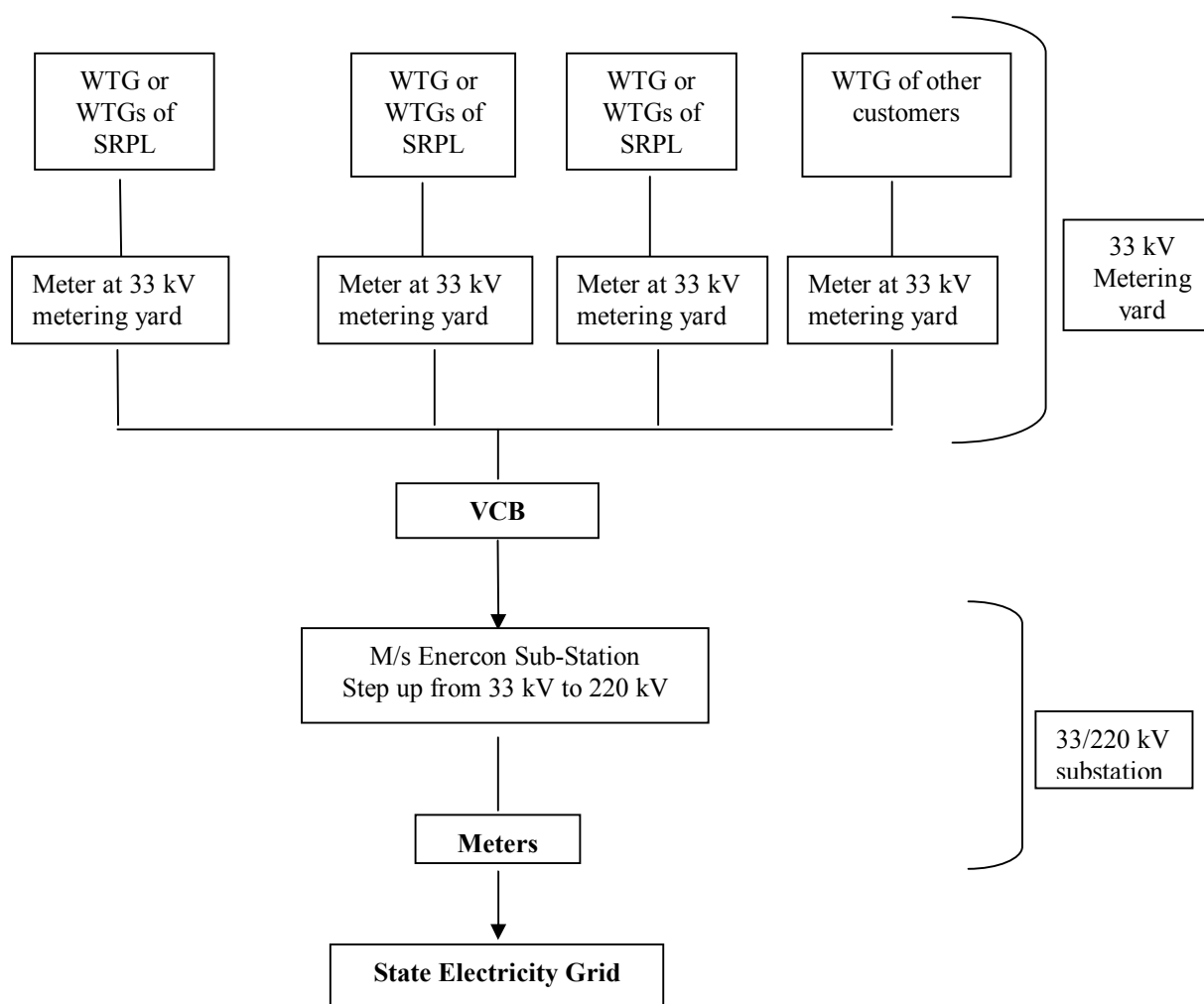
Records: Enercon India Limited/It's Group Companies/Contractor specifically appointed by Enercon maintains an accurate record at the project site of:

- i. Daily generation reading
- ii. Any unusual conditions found during operation/inspections
- iii. All the records will be preserved for 2 years beyond the crediting period.

The billing is on monthly basis. Enercon/ SRPL raises invoice and submit to GUVNL for payment based on share certificate provided by GETCO/GEDA /SLDC (State Load Dispatch Centre)/Authorized representative.

The electrical layout and monitoring points of the WTGs is as follows:

¹ As per letter provided by the technology supplier the inbuilt control panel meters cannot be calibrated.



The above diagram indicates that there are three groups of the WTGs of the project activity for which three meters are provided at the corresponding 33 kV metering yard. Similarly for a group of WTGs of non PP's at a particular site, there are corresponding meters installed at 33 kV metering yard². All the WTGs of (PP + non PP) are connected to the Enercon substation.

The list of meter's corresponding to the project activity WTGs have been provided below:

Location Number of WTGs of project activity	Meter Serial Number installed at the corresponding 33 kV metering yard	Meters at 33/220 kV substation
2082, 2083, 2084, 2118, 2119, 2120	KAB 10784	GJ-0732-A GJ-0731-A
969, 970, 971, 972, 973	09141585	
2047	KAB 10788	

² Depending on the capacity of the wind farm and considering the future expansion of the wind farm, additional WTGs and corresponding yard meters can be installed, which is beyond the control of the PP.

The GETCO authorities arrive at the site every month and record the readings of meters (PP + non PP) placed at the 220 kV Sub-Station and as well as at the 33 kV metering yard. Keeping in view, the net electricity supplied to Grid for every particular customer is computed on **GETCO/ GEDA/ SLDC (State Load Dispatch Centre) /Authorized representative Report**.

Head- Wind Power Projects/ Director keeps the daily/ monthly data generated from all the WTGs provided by Enercon and **GETCO/ GEDA/ SLDC (State Load Dispatch Centre) /Authorized representative**.

Apportioning Procedure for the project activity:

Net Electricity supplied to grid by the project activity (EG_y) = ($EG_{WTG,y} / EG_{Total\ WTG,y}$) x $EG_{y,Total}$

Where

$EG_{WTG,y}$: Net Electricity supplied by the WTGs of SRPL recorded at 33 kV metering yard.

$EG_{Total\ WTG,y}$: Net Electricity supplied by all the WTGs (project activity and non-project activities) connected to 33/220 kV sub-station recorded at 33 kV metering yard.

$EG_{y,Total}$: Net Electricity supplied to grid by project as well as non-project activities recorded at the 33/220 kV sub-station.

Internal audits & Performance review

The records are regularly audited and checked by the SRPL Representative based upon the daily power generation reports and share certificates (**GETCO/ GEDA/ SLDC (State Load Dispatch Centre) /Authorized representative**). The SRPL Representative does the internal audit on yearly basis and crosschecks the emissions reductions estimated in PDD with respect to actual emissions reduction. For any deviation from the actual emission reduction values and reported values corrective action is suggested by SRPL Representative to calculate the conservative emission reduction. All corrective actions are recorded and maintained.

Data Adjustments and Uncertainties

In case of monitoring meter failure or errors, the GETCO officials immediately replace the meter with a calibrated meter. The meter installed at the 220 kV and 33 kV point are calibrated once in three years. In case of any failure in the meter installed at 33 kV metering yard the electricity generation data of the WTG controller is used. In case of any failure of the meters at the 220 kV sub-station the electricity supplied data of the reference meters at 220 kV sub-station is used.

The GETCO/ GEDA (Gujarat Electricity generation Authority) /SLDC (State Load Dispatch Centre)/ **Authorized representative** Report is forwarded to Executive Engineer of GETCO and is certified thereof. Copies of this document are forwarded to the Load Dispatch Center of Gujarat Electricity Distribution Authority (GETCO) and SRPL. The monthly Net Electricity supplied is obtained from the share certificate and the same is used in monitoring report and during verification. Head - Wind power projects of M/s. SRPL is responsible for keeping the copies of share certificate sent to Sargam Retails Pvt. Ltd. from GETCO/GEDA/SLDC/Authorized representative.

SECTION D. Data and parameters**D.1. Data and parameters fixed ex ante or at renewal of crediting period**

Data/Parameter	EF_y
Unit	tCO ₂ / MWh
Description	Combined Margin grid emission factor
Source of data	CEA website Version ³ : 04 (Valid from 1 st September 2008)
Value(s) applied	0.906
Purpose of data	Calculation of baseline emissions
Additional Comment	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

Data/Parameter	EF_{OM,y}
Unit	tCO ₂ / MWh
Description	CO ₂ Operating Margin emission factor of the grid
Source of data	CEA website Version ⁴ : 04 (Valid from 1 st September 2008)
Value(s) applied	1.01
Purpose of data	Calculation of baseline emissions
Additional Comment	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

Data/Parameter	EF_{BM,y}
Unit	tCO ₂ /MWh
Description	CO ₂ Built Margin emission factor of the grid
Source of data	CEA website Version ⁵ : 04 (Valid from 1 st September 2008)
Value(s) applied	0.60
Purpose of data	Calculation of baseline emissions
Additional Comment	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

D.2. Data and parameters monitored

³ <http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>

⁴ <http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>

⁵ <http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>



Data/Parameter	EG_y														
Unit	MWh														
Description	Net Electricity supplied to grid by the project activity														
Measured/Calculated/Default	Calculated														
Source of data	Share Certificate ⁶ issued by GETCO/ GEDA/ SLDC (State Load Dispatch Centre)/ Authorized representative														
Value(s) of monitored parameter	29,802														
Monitoring equipment	<p>The share certificate having the net electricity supplied to grid by the WTGs of SRPL wind farm is made on the basis of monitored electricity through meters at the sending end of the 220 kV substation and at the meters installed at the 33 kV metering yard as per PPA / updated procedure by GUVNL.</p> <p>The value is calculated from the measured parameters as given in the “<i>Apportioning Procedure for the project activity</i>” section C.</p> <p>The lower value of net electricity supplied to grid by the project activity obtained from the apportioning formula provided in section C or the Share certificate is used for the emission reduction calculations.</p> <p>The accuracy class of the substation meters is 0.2s and the accuracy class of yard meters ranging between 0.2s/0.5s</p> <p>Calibration Frequency – Once in three years</p> <p>Date of Last Calibration/Calibration Details of Meters at 33 KV:</p> <table border="1"> <thead> <tr> <th>Meter Serial No.</th><th>Date of Last Calibration</th></tr> </thead> <tbody> <tr> <td>KAB 10784</td><td>04 /02/2009, 24/06/2012</td></tr> <tr> <td>09141585</td><td>04 /09/2009, 24/06/2012</td></tr> <tr> <td>KAB 10788</td><td>04 /02/2009, 24/06/2012</td></tr> </tbody> </table> <p>Date of Last Calibration/Calibration Details of Meters at 220 KV:</p> <table border="1"> <thead> <tr> <th>Meter Serial No</th><th>Date of Last Calibration</th></tr> </thead> <tbody> <tr> <td>Sr. No GJ-0731-A</td><td>02/12/2009</td></tr> <tr> <td>Sr. No GJ-0732-A</td><td>02/12/2009</td></tr> </tbody> </table> <p>Validity- 3 years</p>	Meter Serial No.	Date of Last Calibration	KAB 10784	04 /02/2009, 24/06/2012	09141585	04 /09/2009, 24/06/2012	KAB 10788	04 /02/2009, 24/06/2012	Meter Serial No	Date of Last Calibration	Sr. No GJ-0731-A	02/12/2009	Sr. No GJ-0732-A	02/12/2009
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Sr. No GJ-0731-A	02/12/2009														
Sr. No GJ-0732-A	02/12/2009														
Measuring/Reading/Recording frequency	Continuously measured & monthly recording														

⁶ Share certificate contains the information about the monthly net electricity supplied to grid by the WTGs of project activity which is issued by GETCO/ GEDA/ SLDC (State Load Dispatch Centre)/ Authorized representative.

Calculation method (if applicable)	$(EG_y) = (EG_{WTG,y} / EG_{Total\ WTG,y}) \times EG_{y,Total}$
QA/QC procedures	(Net electricity supplied to grid indicated in share certificate will be crosschecked with the invoices raised by PP).
Purpose of data	Calculation of baseline emissions
Additional comment	<p>The data will be archived electronically for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.</p> <p>In case the monitoring cycle and the billing cycle date do not match, then a conservative approach will be adopted to monitor/calculate the net electricity supplied to the grid.</p>

Data/Parameter	$EG_{y,Total}$
Unit	MWh
Description	Net Electricity supplied to grid by all the WTGs (project as well as non-project activities) recorded at the 33/220 kV sub-station.
Measured/Calculated /Default	Measured
Source of data	Share Certificate ⁷ issued by GETCO/ GEDA/ SLDC (State Load Dispatch Centre)/ Authorized representative
Value(s) of monitored parameter	14,78,301
Monitoring equipment	<p>The share certificate having the net electricity supplied to grid by the WTGs (project as well as non-project activities) is prepared on the basis of monitored electricity through meters at the sending end of the 220 kV substation by GUVNL. The meters at 220 kV sub-station are bilateral and the import and export of electricity at the substation is monitored by these meters. The accuracy class of the substation meters is 0.2s.</p> <p>The meters are sealed by authorised representative of GETCO/GUVNL/GEDA/Its subsidiary company. Hence these meters are not under the control of the PP.</p>
Measuring/Reading/ Recording frequency	Continuously measured & monthly recording
Calculation method (if applicable)	-
QA/QC procedures	Calibration of all the meters is done once in three years.
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be archived electronically for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

⁷ Share certificate contains the information about the monthly net electricity supplied to grid by the WTGs of project activity as well as non project activities which is issued by GETCO/ GEDA/ SLDC (State Load Dispatch Centre)/ Authorized representative.



Data/Parameter	EG_{WTG,y}
Unit	MWh
Description	Net Electricity supplied by the WTGs of SRPL recorded at 33 kV metering yard.
Measured/Calculated /Default	Measured
Source of data	Readings recorded at 33 kV metering yard by OEM for the net electricity supplied by the project activity WTGs
Value(s) of monitored parameter	30,184
Monitoring equipment	<p>The net electricity supplied by the WTGs of SRPL wind farm is measured through meters installed at the 33 kV metering yard. These readings are recorded by the OEM. The meters at 33 kV metering yard are bilateral and the import and export of electricity at the 33 kV metering yard is monitored by these meters. The accuracy class of yard meters ranges between 0.2s/0.5s</p> <p>The meters are sealed by authorised representative of GETCO/GUVNL/GEDA/Its subsidiary company. Hence these meters are not under the control of the PP.</p>
Measuring/Reading/Recording frequency	Continuously measured & monthly recording
Calculation method (if applicable)	-
QA/QC procedures	Calibration of all the meters (meters at the 33 kV metering yard) is done once in three years.
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be archived electronically for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.



Data/Parameter	EG_{Total WTG,y}
Unit	MWh
Description	Net Electricity supplied by all the WTGs (project activity and non-project activities) connected to 33/220 kV sub-station recorded at 33 kV metering yard.
Measured/Calculated /Default	Measured
Source of data	Readings recorded at 33 kV metering yard by OEM
Value(s) of monitored parameter	11,41,548
Monitoring equipment	<p>The net electricity supplied by the WTGs (project activity and non-project activities) is measured through meters installed at the 33 kV metering yard. These readings are recorded by the OEM. The meters at 33 kV metering yard are bilateral and the import and export of electricity at the 33 kV metering yard is monitored by these meters. The accuracy class of yard meters ranges between 0.2s/0.5s</p> <p>The meters are sealed by authorised representative of GETCO/GUVNL/GEDA/Its subsidiary company. Hence these meters are not under the control of the PP.</p>
Measuring/Reading/Recording frequency	Continuously measured & monthly recording
Calculation method (if applicable)	-
QA/QC procedures	Calibration of all the meters (meters at the 33 kV metering yard) is done once in three years.
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be archived electronically for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

D.3. Implementation of sampling plan

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No sampling plan has been used in the calculation of the emission reductions.

SECTION E. Calculation of emission reductions or GHG removals by sinks**E.1. Calculation of baseline emissions or baseline net GHG removals by sinks**

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Net Electricity exported from the project activity = 29,801,989 kWh

EF_y for NEWNE grid = 0.906 tCO₂/MWh

Formula for Baseline Emissions:

Thus Baseline emissions (NEWNE Grid) = (0.906 * 29,801,989)/1000 = 26,999 tCO₂eThus Baseline emissions **BE_y = 26,999 tCO₂****E.2. Calculation of project emissions or actual net GHG removals by sinks**

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The project activity being a wind project falls under the category of renewable energy project as defined in the methodology AMS I.D

For most renewable energy project activities PE_y = 0Hence for the project activity, PE_y = 0**E.3. Calculation of leakage**

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The project activity does not involve transfer of the energy generating equipment as these are newly installed WTG's.

Leakage Emissions LE_y = 0 (since there is no transfer of equipments from or to the project activity) as per AMS I. D.**E.4. Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks**

Time Period	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	Emission reductions or net anthropogenic GHG removals by sinks (tCO ₂ e)
Total	26,999	0	0	26,999

E.5. Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (tCO ₂ e)	16,181 ⁸	26,999

E.6. Remarks on difference from estimated value in registered PDD

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⁸ As per registered PDD the value of estimated emission reduction is 16,181 tCO₂e for 365 days. However the monitoring period is for 628 days, thus for 628 days the estimated emission reduction is 27,840 tCO₂e



PP is claiming emission reduction for 628 days (11/11/2010 to 31/07/2012). As per the registered PDD 16,181 tCO₂e are the estimated emission reduction for a period of 365 days. Thus for 628 days the estimated emission reduction (as per registered PDD) would be 27,840 tCO₂. There is a decrease of 3% in the actual emission reduction as against stated in the registered PDD.



History of the document

Version	Date	Nature of revision
02.0	EB 66 13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	EB 54, Annex 34 28 May 2010	Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance		