



**Verified Carbon
Standard**

MONITORING REPORT FOR BUNDLED WIND ENERGY GENERATION PROJECTS IN GUJARAT, INDIA

Document Prepared by Wind World (India) Power Development Pvt. Ltd.

Project Title	Bundled wind energy generation projects in Gujarat, India
Version	1.3
Report ID	VCS412-2021
Date of Issue	24-05-2021
Project ID	412
Monitoring Period	01-Jan-2020 to 31-Dec-2020 (including both the dates)
Prepared By	Wind World (India) Power Development Pvt. Ltd. ¹
Contact	C/o Wind World Tower, A-9, Veera Industrial Estate, Veera Desai Road, Andheri (W), Mumbai – 400053, Maharashtra (India).

¹ The project activity has been represented by Wind World (India) Power Development Pvt. Ltd. as authorized by its Project Proponent Wind World (India) Ltd.

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The project under consideration is set up to produce clean power from the wind electric converters. The generated electricity is wheeled using the state transmission system for captive consumption. The Project leads to reduced greenhouse gas (GHG) emissions because it displaces electricity from fossil fuel-based electricity generation plants. The project is helping in bridging the demand supply gap by using wind as a source of generating electrical energy.

The project activity consists of the 72 machines of WWIL make of 800 KW each and 3 machine of Enercon make of 600 KW, totalling to the capacity of 59.4 MW in the state of Gujarat. The generated electricity is supplied to the Western regional electricity grid comprising mainly fossil fuel-based power plants. The Project considered harnesses renewable resources in the region, thereby displacing non-renewable natural resources thereby ultimately leading to sustainable economic and environmental development. Wind World (India) Limited (hereafter referred as “WWIL”) is the equipment supplier and the operations and maintenance contractor for the Project.

The first machine under the bundled project activity was commissioned on 30 June 2004 and last machine under the bundled project activity was commissioned on 30 September 2006. This is the second monitoring report of second crediting period associated with the project activity. The period covered in this monitoring report is from 01 January 2020 to 31 December 2020 (including first and last day).

The total emission reductions achieved under this monitoring period i.e. 01 January 2020 to 31 December 2020 (including first and last day) is 62,164 tCO₂e.

1.2 Sectoral Scope and Project Type

Sectoral scope : 1 Energy Industries (renewable-/non renewable sources)

Project Type 1: Renewable energy project - Electricity Generation from Wind..

1.3 Project Proponent

The Project is operated and managed by Wind World (India) Ltd., hereafter will be referred as Wind World (India) Ltd. (or WWIL).

Organization name	Wind World (India) Ltd.
Contact person	Mr. Yogeshh Mehra
Title	Managing Director
Address	A-9, Wind World Tower, Veera Industrial Estate, Veera Desai Road, Andheri (W), Mumbai – 400053. Maharashtra (India).
Telephone	+91-22-66924848
Email	yogeshh.mehra@windworldindia.com

1.4 Other Entities Involved in the Project

Organization name	NA
Role in the Project	NA
Contact person	NA
Title	NA
Address	NA
Telephone	NA
Email	NA

1.5 Project Start Date

Among the project activity bundle, first machine (of Desai Textiles) was commissioned on 30-June-2004.

1.6 Project Crediting Period

Second Crediting Period in VCS, i.e. from 01-Jun-2014 to 31-May-2024.

1.7 Project Location

The Project is spread across villages in Satapar, Okhamadhi, Navadra, Bamnasa, Jodhapar and Kurunga of Jamnagar District in state of Gujarat. The latitudinal & longitudinal as well as the unique identification details of individual machines has been provided in Appendix 1.

1.8 Title and Reference of Methodology

Methodology: ACM0002, version 17.

Title: Grid-connected electricity generation from renewable sources.

The tools referenced in this methodology are:

1. Tool to calculate the emission factor for an electricity system, version 05.0

(<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf>)

2. Tool for the demonstrations and assessment of additionality, version 05.2

(<https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v5.2.pdf>)

1.9 Participation under other GHG Programs

Project has not been applied under any other GHG program or GHG-related environmental credit, including renewable energy certificates, neither part of any Emission Trading Programs and Other Binding Limits during this monitoring period. Hence, the same is not applicable.

1.10 Other Forms of Credit

Project has not been applied under any other GHG program including renewable energy certificates, thus not eligible to participate and claim benefits under any other mechanisms; hence this section is not applicable.

1.11 Sustainable Development

Technical: Increased interest in wind energy projects will further push R&D efforts by technology providers to develop more efficient and better machinery in future.

Economic: The project activity requires temporary and permanent, skilled and semi-skilled manpower at the wind park; this will create additional employment opportunities.

The generated electricity will be fed into the regional grid through local grid, thereby improving the grid frequency and availability of electricity to the local consumers (villagers & sub-urban habitants) which will provide new opportunities for industries and economic activities to be setup in the area thereby resulting in greater local employment, ultimately leading to overall development.

Social: The project activity has led to the development of supporting infrastructure such as road network etc., in the wind park location, which also provides access to the local population.

Use of a renewable source of energy reduces the dependence on imported fossil fuels variation thereby leading increased energy security.

Environmental: The project activity involves use of renewable energy source for electricity generation instead of fossil fuel-based electricity generation, thereby reducing emission reductions.

Being a renewable resource, using wind energy to generate electricity contributes to resource conservation. Thus, the project causes no negative impact on the surrounding environment contributing to environmental well being.

2 SAFEGUARDS

2.1 No Net Harm

An EIA study had been conducted through M/s CARE Sustainability Pvt. Ltd. The results of the EIA study show that project activity will not involve any negative environmental impacts, as the WECs are installed for generation of power using wind which is a clean source of energy.

2.2 Local Stakeholder Consultation

A stakeholder meeting was held on 16/12/2006 involving the local stakeholders at the project site. The meeting was attended by local villagers, panchayat members, shopkeepers, suppliers, vendors and representatives of PPs. The stakeholders were explained about the project activity and the various benefits arising out of the project activity. A discussion was held in which the views of the local stakeholders were addressed. No negative comments received.

Nevertheless, PP is open for the continuous stakeholder interaction and formed a grievance/suggestion register and a grievance box placed at the project site for the comments at any point of time during the project crediting period. PP has explained this mechanism for on-going communication to the local stakeholders and transparently kept the notice mentioning the grievance register and box at the project site. The accounting of all and any input received during ongoing communication should be taken in consideration to take the appropriate measure to resolve the grievance.

However, the project activity is a wind power generation project and operates without any emission to air, water & soil even there is no noise pollution is associated with the project. No issues and grievance for the project activity has been identified during the current monitoring period. There are no comments received during the current monitoring period from the stakeholders

2.3 AFOLU-Specific Safeguards

Not Applicable.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The first machine under the bundled project activity was commissioned on June 2004 and last machine under the bundled project activity was commissioned on September 2006. The project activity consists of 72 machines of Enercon make of 800 kW each and 3 machine of Enercon make of 600 kW totaling to the capacity of 59.4 MW.

The commissioning schedule for all the WEGs under the project activity has been provided in Appendix 2. WWIL operation and maintenance activities are ISO certified and all the events are recorded in the log book available at the project site. There is no any major special events for any of the machines occurred during this monitoring period, which may have impact on the applicability of the methodology as well as emission reduction. As a part of regular maintenance the machines are stopped for mechanical and electrical maintenance for 16 to 18 hours annually and for visual inspection for 6 to 7 hours quarterly.

3.2 Deviations

2.3.1 Methodology Deviations

There has not been any methodology deviation.

2.3.2 Project Description Deviations

Deviations during second monitoring period :

Project deviation was taken on account of delay in meter calibration. The calibration is not in the purview of the Project Participant (PP) and is performed by the GETCO, Testing Division; which is the authorized body for meter testing as per the Wind Energy Purchase Agreement (PPA). The meters are tested, sealed and maintained by GETCO only in the presence of authorized representative of the PP who also signs the results. In the calibration certificates the meters with delayed calibration, the error factor's was found to be within permissible limits. However, PP has followed conservative approach and hence, an error factor equating the maximum permissible limit of error for the meters has been applied for the delayed period falls under the current monitoring period i.e. for the whole month of April 2017 being conservative . (i.e. -1 % as GETCO provides only net energy exported to the grid).

Deviations during current monitoring period:

During current monitoring period a deviation has been taken on account of delay in meter calibration. The calibration is not in the purview of the Project Participant (PP) and is performed by the GETCO, Testing Division; which is the authorized body for meter testing as per the Wind Energy Purchase Agreement (PPA). The meters are tested, sealed and maintained by GETCO only in the presence of authorized representative of the PP who also signs the results. There is delay in calibration of energy meters in the year 2020. In year 2020, the scheduled date of calibration was 06/04/2020 but these energy meters are not calibrated yet. Therefore, PP has applied maximum error factor (-1.0 %) in all net export values taken from the whole month of April 2020 to Dec 2020 being conservative. (i.e. -1% as GETCO provides only net energy exported to the grid).

Hence, it can be confirmed from the above explanation that the deviation does not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

3.3 Grouped Projects

Not applicable.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _{grid,BM,y}
Data unit	tCO ₂ e/MWh
Description	Build margin CO ₂ emission factor in year y
Source of data	“CO ₂ Baseline Database for Indian Power Sector” published by the Central Electricity Authority, Ministry of Power, Government of India. The “CO ₂ Baseline Database for Indian Power Sector, Version 11”, available at www.cea.nic.in
Value applied	0.9285
Justification of choice of data or description of measurement methods and procedures applied	The data has been sourced from CEA (CO ₂ Baseline Database) is an authentic source of data. The Build Margin (EF _{grid,BM,y}) is taken from CEA data base, version 11. The grid boundary w.r.t the connected state grid is Indian Regional Grid of India.
Purpose of Data	Calculation of baseline emissions

Comments	The combined margin is fixed ex-ante
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Data / Parameter	EF _{grid,OM,y}
Data unit	tCO ₂ e/MWh
Description	Operating margin CO ₂ emission factor in year y
Source of data	“CO ₂ Baseline Database for Indian Power Sector” published by the Central Electricity Authority, Ministry of Power, Government of India. The “CO ₂ Baseline Database for Indian Power Sector, Version 11”, available at www.cea.nic.in
Value applied	0.9941
Justification of choice of data or description of measurement methods and procedures applied	The data has been sourced from CEA (CO ₂ Baseline Database) is an authentic source of data. The Operating Margin (EF _{grid,OM,y}) is taken from CEA data base, version 11. The grid boundary w.r.t the connected state grid is Indian Regional Grid of India.
Purpose of Data	Calculation of baseline emissions
Comments	The combined margin is fixed ex-ante

Data / Parameter	EF _y (EFCM,y)
Data unit	tCO ₂ e/MWh
Description	Combined Margin Emission Factor of Indian Regional Grid (Ex-ante fixed)
Source of data	“CO ₂ Baseline Database for Indian Power Sector” published by the Central Electricity Authority, Ministry of Power, Government of India. The “CO ₂ Baseline Database for Indian Power Sector, Version 11”, available at www.cea.nic.in
Value applied	0.9777
Justification of choice of data or description of measurement methods and procedures applied	The data has been sourced from CEA (CO ₂ Baseline Database) is an authentic source of data. The grid emission factor (EF _y) is taken from CEA data base, version 11. The grid boundary w.r.t the connected state grid is Indian Grid. The combined margin of emission factors is taken as 0.9777 CO ₂ e/MWh and is fixed ex-ante for the entire crediting period.
Purpose of Data	Calculation of baseline emissions
Comments	The combined margin is fixed ex-ante

4.2 Data and Parameters Monitored

Data / Parameter	EGy
Data unit	MWh (Mega-Watt hour)
Description	Net Electricity supplied to the Grid by Project Activity.
Source of data	Certification of metering records and share certificate for electricity produced by wind farm provided by GEDA (Gujarat Energy Development Agency).
Description of measurement methods and procedures to be applied	Net electricity supplied to grid by project activity is calculated by GEDA officials after apportioning transmission loss between individual meter installed at project site & sub-station meter. Transmission loss is determined by the state utility unilaterally on the basis of bulk meter readings measured directly and is applied in the GEDA certificates.
Frequency of monitoring/recording	Monthly: The reading is jointly noted by the representatives of Electricity Board officials and WWIL. The value of EGy for the project activity is also provided in the GEDA certificates and is applied directly for calculation of emission reductions.
Value monitored	63580.959
Monitoring equipment	All the meters are two way tri-vector meter. Please refer section 4.3 for meter details.
QA/QC procedures to be applied	QA/QC procedures are implemented by state utility pursuant to the provisions of the power purchase agreement
Purpose of the data	Calculation of baseline emissions
Calculation method	Data is sourced from GEDA certificates. PP does not do any calculation of apportioning
Comments	None

4.3 Monitoring Plan

A detailed line diagram of project activity is shown in below picture. From the below picture it is clear that project activity (59.4 MW) has been installed at two locations. At one location there are 71 WEGs connected to 33kV individual metering point and other location has 04 WEGs connected to 11kV individual metering point at project site. Project activities along with the WEGs of other customers are connected to 33kV and 11kV feeder line at respective WWIL Sub-stations (132kV Bhogat & 66kV Navadra sub-stations) as mentioned in picture. At both WWIL sub-stations output of feeder line is step up to 132kV & 66kV respectively using step up

transformer. Output of transformer is connected to Bulk/Common metering point at WWIL sub-stations where billing is to be done by Electricity Board officials on monthly basis. From WWIL Sub-station electricity is supplied to Electricity Board sub-station from where electricity is supplied to state electricity grid. The general conditions set out for metering, recording, meter readings, meter inspections, Test & Checking and communication are as per the Wheeling agreement with Gujarat Electricity Transmission Corporation Limited (GETCO). However, the procedures adopted for metering details vary with the EPC contractor.

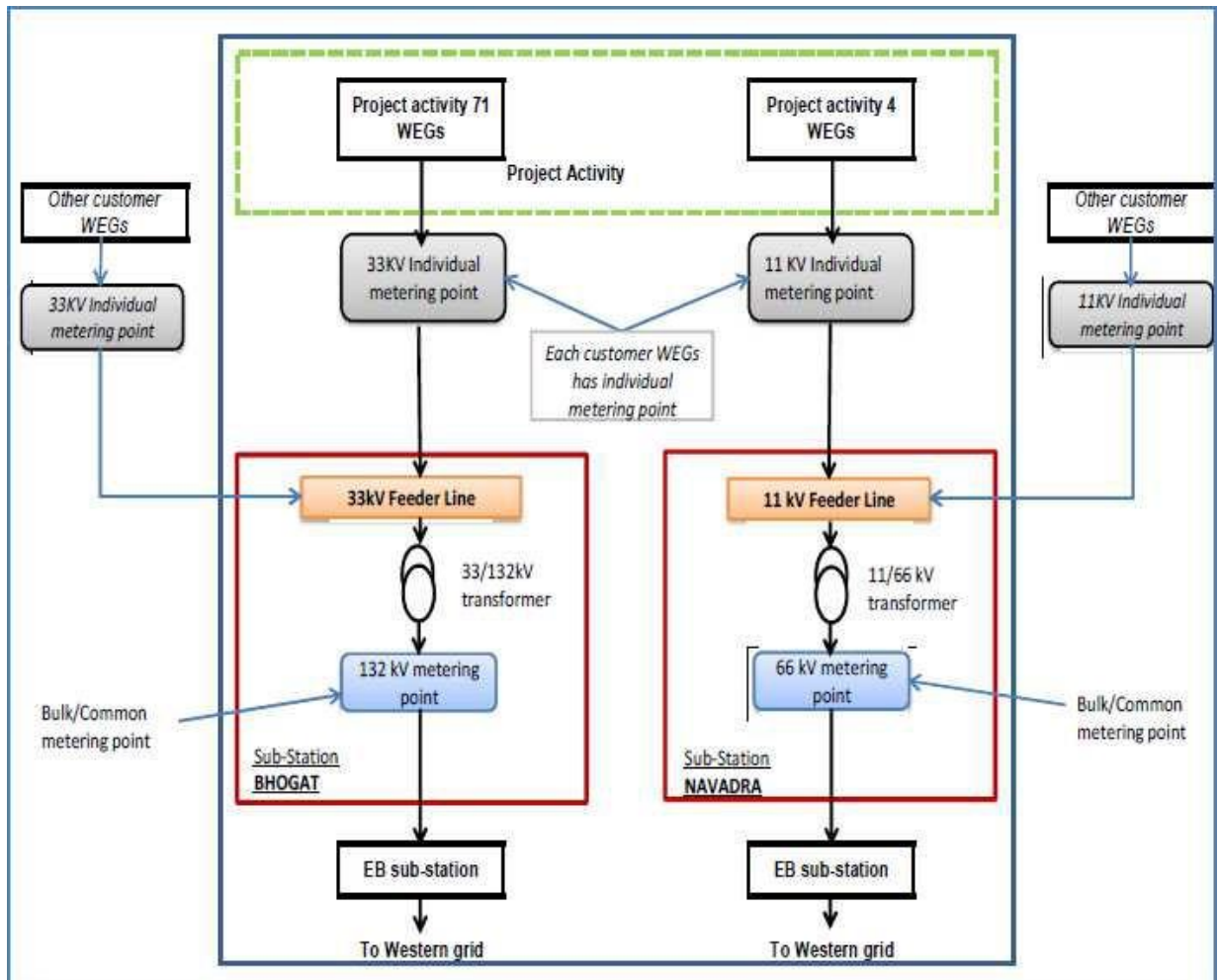
The paragraphs below present the procedure adopted by the respective EPC contractors:

Metering: Project activity has 33kV and 11kV individual metering point for individual customers installed at project site. In addition to 33kV and 11kV metering point there is bulk/common metering point installed at WWIL Sub-station (132kv-Bhogat Sub-station & 66kV-Navadra Substation) where metering is done for all the WEGs of project activity & non- project activity.

Metering Equipment: Metering equipment is an electronic trivector meter of accuracy class 0.5% required for the Project. The meter is installed and owned by GEDA. The metering equipment is maintained in accordance with electricity standards prevalent in Gujarat.

Meter Test Checking: The meter is tested for accuracy with reference to a portable standard meter. The portable standard meter is also owned by GEDA. The meter is deemed to be working satisfactorily if the errors are within specifications for meters of 0.5 accuracy classes. The consumption registered by the meter alone holds good for the purpose of metering electricity supplied to the grid as long as the error in the meter is within the permissible limits. During the meter test checking, the meter is found to be within permissible limits of error.

Monthly Meter Readings: The Net electricity supplied to the grid is recorded monthly by taking Joint Meter Reading (JMR) at individual metering point (33kV & 11kV at project site) along with the bulk/common metering point installed at WWIL Sub-station (132kV – Bhogat & 66kVNavadra) in the presence of officials from GEDA and WWIL as O&M contractor, on behalf of project sponsor on the first day of every month at the Delivery Point. The Joint meter reading contains the value of energy imported and exported and the net export to the grid during the recording period. This Joint meter reading is certified by the Executive engineer of GEDA and by WWIL Officials. Based on the JMR reading recorded on monthly GEDA issues the share of electricity certificate mentioning the net electricity supplied to grid by individual customer.



Calibration frequency: As per registered VCS PD, the meter testing and checking procedures are solely within the purview of GETCO (Gujarat Energy Transmission Corporation Limited) and are outside the purview of the monitoring plan for the projects. Since meter testing and checking procedures are solely within the purview of GETCO, all the meters at the project site and WWIL substation are calibrated and tested once in a period of three years. Meters installed at the project site are of accuracy class of 0.2%/ 0.5%; 4 out of 5 meters are of 0.5% accuracy class while 1 meter is of 0.2% accuracy class. Please refer below table for detailed information: -

Calibration details for all the meters are as follows

Name of WWIL Substation	Meter Serial No	Accuracy Class	Calibration Dates	Calibration Due on
Bhogat	GJB 00486	0.5%	06-April-2017	06-April-2020

	GJU07452	0.2%	06-April-2017	06-April-2020
Navadra	GJB 00267	0.5%	07-April-2017	07-April-2020
	GJB 00268	0.5%	07-April-2017	07-April-2020
	GJU 00269	0.5%	07-April-2017	07-April-2020

There is delay in calibration of energy meters in the year 2020. In year 2020, the scheduled date of calibration was 06/04/2020 but these energy meters are not calibrated yet. Therefore, PP has applied maximum error factor (1.0 %) in all net export values taken from the month April 2020 to Dec 2020. Moreover, as per registered VCS PD, the meter testing and checking procedures are solely within the purview of GETCO (Gujarat Energy Transmission Corporation Limited) and are outside the purview of the monitoring plan for the projects. Energy meters at WWIL substation should be calibrated and tested once in a period of three years. PP has intimated the utility regarding the delay in calibration of meters, but same has not been done yet. It may please be noted that there has not been any project description related change as meters were working satisfactorily during the current monitoring period. Additionally, the applied methodology does not specify any specific time period for conducting the calibration/testing of the equipment. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006, which is considered as National Standard mentions that “All interface meters shall be tested at least once in five years.”

QA/QC Procedures: Every month these meter readings are jointly recorded by GEDA representative and WWIL officials. The meters at the project site and WWIL substation are the two- way tri-vector meters and are in the custody of GEDA. QA/QC procedures will be as implemented by GEDA. Since the readings are taken at the point of supply of power to the grid, the transmission and distribution losses and the minimum reactive power consumption has already been taken into account. The meters at the substation are calibrated as per meter testing and checking procedures of GETCO to ensure accuracy of data as per the provision in PPA.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline is the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO₂e/kWh) calculated in a transparent and conservative manner as the weighted average emissions (in kg CO₂e/kWh) as described in validated VCS PD.

Thus,

$$\begin{aligned} BE_y &= EG_y * EF_y \\ &= 63580.959 \text{ MWh} * 0.9777 \text{ tCO}_2\text{e/MWh} \\ &= 62,164 \text{ tCO}_2\text{e} \end{aligned}$$

(Here, rounded down value has been considered on the summed value of the monthly calculation for conservative estimation. Please refer to the ER sheet)

Where,

BE_y is baseline emissions in year y, tCO₂e

EG_y is the net electricity supplied to the grid in year y

EF_y is the CO₂e emission factor of the grid (0.9777 tCO₂e/MWh fixed ex-ante).

5.2 Project Emissions

Since the project activity is a renewable energy project which generates electricity using wind power and hence does not result in project emissions as per the applicable methodology ACM0002, version 17.

$$PE_y = 0$$

5.3 Leakage

No leakage is considered from the project activity as per approved methodology ACM0002.

5.4 Net GHG Emission Reductions and Removals

According to equation prescribed in ACM0002 (version 17), the Emission Reduction is calculated by subtracting the project emissions from the baseline emissions.

$$\begin{aligned} \text{Thus, } ER_y &= BE_y - PE_y - LE_y \\ &= BE_y - 0 - 0 \end{aligned}$$

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2020 (01-Jan-2020 to 31-Dec-2020)	62,164	0	0	62,164
Total	62,164	0	0	62,164

Comparison of ex-ante emission reductions of the registered PD for the equivalent period:

Start date of Monitoring period	01-Jan-2020	date
End date of Monitoring period	31-Dec-2020	date
Total days in the Monitoring period	366	days
Annual Estimated emission Reduction as per	91,266	tCO ₂ e
Estimated emission reduction for this monitoring	91,516	tCO ₂ e
Actual Emission Reduction	62,164	tCO ₂ e
Difference in Emission reduction	-32.07 %	%

Thus, there is a 32.07 % variation (negative) in the total ERs, which is due to lower wind availability leading to low plant load factor during the current monitoring period.

APPENDIX 1: LATITUDE & LONGITUDE DETAILS

S. N o.	Name of Customer	M/ C Model	Type of M/ C	No. of M/ C	Capacity (MW)	Site	District	Loc. No.	Latitude (Degree, Min., Sec.)	Longitude (Degree, Min., Sec.)
1	Ahmedabad Strips P. Ltd.	E-48	0.8	1	0.80	Kurunga	Jamnagar	ASPL KRG-01	N22 00 41.0	E69 10 13.3
2	Austin Engineering Co Ltd	E-48	0.8	1	0.80	Kurunga	Jamnagar	AECL KRG-01	N22 00 22.5	E69 10 45.6
3	Bhavani Industries	E-48	0.8	1	0.80	Navadara	Jamnagar	BINA-01	N21 56 19.2	E69 17 00.7
4	Desai Textiles	E-40	0.6	1	0.60	Navadra	Jamnagar	DTPL-01	N21 56 28.2	E69 14 21.4
5	Dinesh Mills	E-48	0.8	5	4.00	Bamnasa	Jamnagar	SDML BM-01	N22 05 52.6	E69 12 55.3
								SDML BM-02	N22 05 38.9	E69 12 54.7
								SDML BM-03	N22 05 34.5	E69 12 54.2
								SDML BM-04	N22 05 29.8	E69 12 54.6
								SDML BM-05	N22 05 25.2	E69 12 55.8
6	Eagle Fibres P. Ltd.	E-48	0.8	1	0.80	Kurunga	Jamnagar	EFPL KRG-01	N22 00 44.5	E69 10 21.1
7	Echjay Industries Pvt Ltd	E-48	0.8	6	4.8	Satapar	Jamnagar	EIPLS P-01	N21 58 31.1	E69 18 24.5
								EIPLS P-02	N21 58 26.3	E69 18 25.3
								EIPLS P-03	N21 58 21.7	E69 18 28.0
								EIPLS P-04	N21 58 16.9	E69 18 29.4
								EIPLS P-05	N21 58 12.2	E69 18 30.1
								EIPLS P-06	N21 58 07.5	E69 18 31.0
8	Empilon Fabrics P.	E-	0.8	1	0.80	Navadra	Jamnagar	EFPL	N21 56 56.9	E69 16 58.1

	Ltd.	48						NA-01		
9	Excel Crop Care Limited	E-48	0.8	1	0.80	Navadra	Jamnagar	ECCL NA-01	N21 56 50.6	E69 16 36.9
10	Gujarat Guardian Ltd.	E-48	0.8	14	11.20	Bamnasa	Jamnagar	GGLB M-01	N22 05 47.4	E69 13 12.1
								GGLB M-02	N22 05 42.7	E69 13 12.4
								GGLB M-03	N22 05 37.7	E69 13 12.7
								GGLB M-04	N22 05 32.9	E69 13 13.0
								GGLB M-05	N22 05 27.9	E69 13 12.3
								GGLB M-06	N22 05 23.3	E69 13 13.0
								GGLB M-07	N22 05 18.1	E69 13 13.3
								GGLB M-08	N22 05 13.0	E69 13 13.7
								GGLB M-09	N22 05 08.2	E69 13 13.2
								GGLB M-10	N22 05 03.1	E69 13 12.8
								GGLB M-11	N22 04 59.0	E69 13 15.7
								GGLB M-12	N22 04 53.8	E69 13 13.4
								GGLB M-13	N22 04 49.3	E69 13 08.7
								GGLB M-14	N22 05 55.3	E69 13 08.0
	Gujarat Guardian Ltd.	E-48	0.8	7	5.6	Kurunga	Jamnagar	GGLK RG-01	N22 02 25.5	E69 09 58.8
								GGLK RG-02	N22 02 19.7	E69 10 04.9
								GGLK RG-03	N22 02 14.0	E69 10 11.1
								GGLK RG-04	N22 02 19.2	E69 10 22.8
								GGLK RG-05	N22 02 30.7	E69 10 10.5
								GGLK RG-06	N22 02 36.4	E69 10 04.4
								GGLK RG-07	N22 02 51.6	E69 10 10.4
	Gujarat Guardian Ltd.	E-48	0.8	5	4	Satapar	Jamnagar	GGLS P-01	N21 58 01.2	E69 18 52.5

								GGLS P-02	N21 58 05.6	E69 18 51.5
								GGLS P-03	N21 58 10.7	E69 18 52.4
								GGLS P-04	N21 58 17.6	E69 18 52.7
								GGLS P-08	N21 58 35.8	E69 18 22.1
	Gujarat Guardian Ltd.	E- 48	0.8	3	2.4	Satapar	Jamnagar	GGLS P-05	N21 58 20.5	E69 18 49.3
								GGLS P-06	N21 58 45.2	E69 18 18.8
								GGLS P-07	N21 58 40.5	E69 18 20.4
1 1	Indo Fashions Pvt. Ltd.	E- 48	0.8	1	0.80	Kurunga	Jamnagar	IFPLK RG- 01	N22 00 24.0	E69 10 29.8
1 2	Inova Cast Pvt Ltd	E- 48	0.8	1	0.80	Kurunga	Jamnagar	ICPLK RG- 01	N22 00 16.7	E69 10 51.7
1 3	Jagdish Technocast Pvt. Ltd.	E- 48	0.8	1	0.80	Navadra	Jamnagar	JTPLN A-01	N21 56 15.6	E69 16 42.7
1 4	Jayant Agro- Organics Limited	E- 48	0.8	2	1.60	Navadra	Jamnagar	JAOL NA-01	N21 57 06.4	E69 16 52.1
								JAOL NA-02	N21 57 02.7	E69 16 53.8
1 5	Kanishka Prints P. Ltd.	E- 48	0.8	1	0.80	Bamnasa	Jamnagar	KPPL BM- 01	N22 05 31.1	E69 13 35.6
1 6	Leamak Healthcare P. Ltd.	E- 48	0.8	1	0.80	Navadra	Jamnagar	LHPN A-01	N21 56 49.7	E69 17 00.3
1 7	Madhusudan Special Solutions	E- 48	0.8	1	0.80	Satapar	Jamnagar	MSSP LSP- 01	N21 57 58.0	E69 18 35.0
1 8	Manish Packaging P. Ltd.	E- 48	0.8	1	0.80	Kurunga	Jamnagar	MPPL KRG- 01	N22 02 30.7	E69 09 53.2
1 9	Mascot Forge Pvt. Ltd.	E- 48	0.8	1	0.80	Satapar	Jamnagar	MFPL SP-01	N21 58 55.0	E69 18 10.3
2 0	Nawaz Silk Mill	E- 48	0.8	1	0.80	Kurunga	Jamnagar	NSM KRG- 01	N22 00 34.1	E69 10 33.3
2 1	Prabhat Elastomers P. Ltd.	E- 48	0.8	2	1.6	Kurunga	Jamnagar	PEPL KRG- 01	N22 00 05.8	E69 10 47.2
								PEPL KRG- 02	N22 00 13.2	E69 10 39.4
2 2	Rachana Art Prints Pvt. Ltd.	E- 48	0.8	1	0.80	Bamnasa	Jamnagar	RACH NBM- 01	N22 05 26.9	E69 13 38.4
2 3	Rajhans Metals Pvt Ltd	E- 48	0.8	1	0.80	Kurunga	Jamnagar	RMPL KG-	N22 00 40.6	E69 10 27.8

								01		
24	Rajshanti Metals Pvt Ltd	E-48	0.8	1	0.80	Navadra	Jamnagar	RMPL NA-01	N22 00 41.2	E69 10 27.9
25	Ravikan Ceramics Pvt. Ltd.	E-48	0.8	1	0.80	Navadra	Jamnagar	RCPN A-01	N21 56 25.4	E69 16 57.1
26	Rivaa Textiles Ltd	E-40	0.6	2	1.20	Navadra	Jamnagar	RIVAA -01	N21 56 40.0	E69 14 30.2
								RIVAA -02	N21 56 36.7	E69 14 33.2
27	Sayaji Iron & Engineering Co.	E-48	0.8	1	0.80	Satapar	Jamnagar	SIECL SP-01	N21 58 24.5	E69 18 46.1
28	Shilp Gravures Ltd.	E-48	0.8	1	0.80	Navadra	Jamnagar	SGLN A-01	N21 56 41.7	E69 17 03.8
29	Shree Sai Calnates India (P) Ltd.	E-48	0.8	1	0.80	Navadra	Jamnagar	SSCP LNA-01	N21 56 22.2	E69 16 41.0
30	Shreeji Prints Pvt. Ltd.	E-48	0.8	2	1.60	Bamnasa	Jamnagar	SHRE EBM-01	N22 05 36.2	E69 13 37.9
								SHRE EBM-02	N22 05 40.6	E69 13 45.1
31	Surbhi Industries Ltd.	E-48	0.8	1	0.80	Kurunga	Jamnagar	SILKR G-01	N22 00 17.9	E69 10 34.5
32	Transmetal Limited	E-48	0.8	1	0.80	Navadra	Jamnagar	TLNA-01	N21 56 44.1	E69 16 34.3
33	Unique Tags Private Limited	E-48	0.8	1	0.80	Navadra	Jamnagar	UTPL NA-01	N21 56 38.3	E69 16 23.2
34	Zydex Industries	E-48	0.8	1	0.80	Satapar	Jamnagar	DEXS P-01	N21 59 01.0	E69 18 12.6
	Total capacity			75	59.4	MW				

APPENDIX 2: COMMISSIONING DETAILS

S. No.	Name of Customer	Type of M/C	No. of M/C	Capacity (MW)	Site	District	Date of Commissioning
1	Ahmedabad Strips P. Ltd.	0.8	1	0.80	Kurunga	Jamnagar	03/12/2005
2	Austin Engineering Co Ltd	0.8	1	0.80	Kurunga	Jamnagar	23/12/2005
3	Bhavani Industries	0.8	1	0.80	Navadara	Jamnagar	07/03/2006
4	Desai Textiles	0.6	1	0.60	Navadra	Jamnagar	30.06.2004
5	Dinesh Mills	0.8	5	4.00	Bamnasa	Jamnagar	16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
6	Eagle Fibres P. Ltd.	0.8	1	0.80	Kurunga	Jamnagar	04/02/2006
7	Echjay Industries Pvt Ltd	0.8	6	4.8	Satapar	Jamnagar	12/09/2006
							12/09/2006
							12/09/2006
							12/09/2006
							12/09/2006
							29/09/2006
8	Empilon Fabrics P. Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
9	Excel Crop Care Limited	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
10	Gujarat Guardian Ltd.	0.8	14	11.20	Bamnasa	Jamnagar	16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
							16/03/2005
							29/03/2005
							29/03/2005
							30/03/2005
							31/03/2005
							31/03/2005
							31/03/2005
							30/03/2005
							16/07/2005
	Gujarat Guardian Ltd.	0.8	7	5.6	Kurunga	Jamnagar	23/08/2006
							23/08/2006

							23/08/2006
							23/08/2006
							23/08/2006
							23/08/2006
							23/08/2006
	Gujarat Guardian Ltd.	0.8	5	4	Satapar	Jamnagar	05/09/2006
							05/09/2006
							05/09/2006
							05/09/2006
							05/09/2006
	Gujarat Guardian Ltd.	0.8	3	2.4	Satapar	Jamnagar	29/09/2006
							29/09/2006
							29/09/2006
11	Surabhi Textile Mills Pvt Ltd	0.8	1	0.80	Kurunga	Jamnagar	15/12/2005
12	Inova Cast Pvt Ltd	0.8	1	0.80	Kurunga	Jamnagar	23/12/2005
13	Jagdish Technocast Pvt. Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
14	Jayant Agro-Organics Limited	0.8	2	1.60	Navadra	Jamnagar	07/03/2006
15	Kanishka Prints P. Ltd.	0.8	1	0.80	Bamnasa	Jamnagar	17/08/2005
16	Leamak Healthcare P. Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
17	Madhusudan Special Solutions	0.8	1	0.80	Satapar	Jamnagar	30/09/2006
18	Manish Packaging P. Ltd.	0.8	1	0.80	Kurunga	Jamnagar	23/03/2006
19	Mascot Forge Pvt. Ltd.	0.8	1	0.80	Satapar	Jamnagar	22/09/2006
20	Nawaz Silk Mill	0.8	1	0.80	Kurunga	Jamnagar	15/12/2005
21	Prabhat Elastomers P. Ltd.	0.8	2	1.6	Kurunga	Jamnagar	17/11/2005
22	Rachana Art Prints Pvt. Ltd.	0.8	1	0.80	Bamnasa	Jamnagar	17/08/2005
23	Rajhans Metals Pvt Ltd	0.8	1	0.80	Kurunga	Jamnagar	23/12/2005
24	Rajshanti Metals Pvt Ltd	0.8	1	0.80	Navadra	Jamnagar	19/11/2005
25	Ravikan Ceramics Pvt. Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
26	Rivaa Textiles Ltd	0.6	2	1.20	Navadra	Jamnagar	20/08/2004
27	Sayaji Iron & Engineering Co.	0.8	1	0.80	Satapar	Jamnagar	05/09/2006
28	Shilp Gravures Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
29	Shree Sai Calnates India (P) Ltd.	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
30	Shreeji Prints Pvt. Ltd.	0.8	2	1.60	Bamnasa	Jamnagar	17/08/2005

31	Surbhi Industries Ltd.	0.8	1	0.80	Kurunga	Jamnagar	15/12/2005
32	Transmetal Limited	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
33	Unique Tags Private Limited	0.8	1	0.80	Navadra	Jamnagar	07/03/2006
34	Zydex Industries	0.8	1	0.80	Satapar	Jamnagar	22/09/2006
	Total capacity		75	59.4	MW		