

# KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

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VERSION **v. 1.2**

RELATED SUPPORT

**- TEMPLATE GUIDE Key Project Information & Project Design Document v.1.2**

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This document contains the following Sections

Key Project Information

Q – Description of project

Q - Application of approved Gold Standard Methodology (ies) and/or demonstration of SDG Contributions

Q – Duration and crediting period

Q – Summary of Safeguarding Principles and Gender Sensitive Assessment

Q – Outcome of Stakeholder Consultations

Appendix 1 – Safeguarding Principles Assessment (mandatory)

Q - Contact information of Project participants (mandatory)

Q - LUF Additional Information (project specific)

Q - Summary of Approved Design Changes (project specific)

## KEY PROJECT INFORMATION

GS ID of Project	GS7589 <sup>1</sup>
Title of Project	9.6 MW Wind Energy Project at Jamvadi & Navagam & Kalavad, Jamnagar, Gujarat, India of Rohit Surfactants Pvt. Ltd
Time of First Submission Date	
Date of Design Certification	01/04/2021 (tentative)
Version number of the PDD	02
Completion date of version	15/03/2022
Project Developer	Rohit Surfactants Pvt. Ltd
Project Representative	EKI Energy Services Limited
Project Participants and any communities involved	<b>Project Participant:</b> Rohit Surfactants Pvt. Ltd <b>Communities Involved:</b> Not Applicable
Host Country (ies)	India
Activity Requirements applied	<input type="checkbox"/> Community Services Activities <input checked="" type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
Scale of the project activity	<input type="checkbox"/> Micro scale <input checked="" type="checkbox"/> Small Scale <input type="checkbox"/> Large Scale
Other Requirements applied	Not Applicable
Methodology (ies) applied and version number	AMS I.D. Version 18.0 <sup>2</sup> "Grid Connected Renewable Electricity Generation"
Product Requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A
Project Cycle:	

<sup>1</sup> <https://registry.goldstandard.org/projects/details/2204>

<sup>2</sup> [https://cdm.unfccc.int/filestorage/2/P/7/2P7FS6ZQAR84LG3NMKYUH50WI9ODBC/EB81\\_repan24\\_AMS-I.D\\_ver18.pdf?t=azl8cXNiNGlofDBwgYvufFNY0FL0bqfx9oI7](https://cdm.unfccc.int/filestorage/2/P/7/2P7FS6ZQAR84LG3NMKYUH50WI9ODBC/EB81_repan24_AMS-I.D_ver18.pdf?t=azl8cXNiNGlofDBwgYvufFNY0FL0bqfx9oI7)

- Regular
- Retroactive

**Land-use & Forest Key Project Information<sup>3</sup>**

Not Applicable

**Table 1 – Estimated Sustainable Development Contributions**

Sustainable Development Goals Targeted	SDG Impact (defined in Error! No se encuentra el origen de la referencia.)	Estimated Annual Average	Units or Products
SDG 13- Take urgent action to combat climate change and its impacts	Emission reductions	12,932 tCO <sub>2</sub> e	tCO <sub>2</sub> e
SDG 7– Ensure access to affordable, reliable, sustainable and modern energy for all	MWh of renewable energy generated	14,019 MWh	MWh
SDG 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Number of trainings and hiring through project	1 training/annum and employment to 10 persons	Number of trainings and Employment generated through project

**SECTION A. DESCRIPTION OF PROJECT**

**A.1 Purpose and general description of project**

The project activity involves the installation of 12 Wind Turbine Generators (WTGs) with a total capacity of 9.6 MW located at Jamnagar, Gujarat, India by Rohit surfactants Pvt. Ltd. The wind farm harnesses wind energy potential in the Jamnagar district and intends to promote renewable energy by addressing the causative factors of low utilisation of renewable energy resources.

All the WTGs are connected to the regional grid and as per the Power Purchase Agreement (“PPA”) the generated electricity is being sold to Gujarat Urja Vikas Nigam Limited (GUVNL). Enercon India Ltd. (EIL) is the equipment supplier and operations & maintenance contractor for the project activity.

As it is a green field project, scenario existing prior to the start of the project activity (=baseline scenario) would be electricity generation from the existing grid. Applying the simplified methodologies specified for small scale project activities, 9.6 MW wind energy project is expected to result in an annual emissions avoidance of 17,983 tCO<sub>2</sub> as compared with the baseline scenario of INDIAN grid (erstwhile NEWNE grid).

**Purpose of the Project Activity**

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<sup>3</sup> Please refer to 0 for detailed information on LUF projects

The project activity aims to mitigate Green House Gas (GHG) emissions through generation of renewable power, and export of power to the regional grid. The electricity generated from the project site will displace the electricity generated from thermal power stations feeding into regional grid. Since wind power is GHG emissions free, the power generated will displace the anthropogenic GHG emissions generated by the fossil fuel based thermal power stations.

### **Pre-project scenario: No Project Activity**

The project activity is a green field project, which means no power generation facility existed at the project site in the pre-project scenario. Hence, absence of any project activity is a befitting pre-project scenario at project site.

### **Baseline scenario:**

The electricity produced by the project activity will be supplied to state electricity board, which lies in Western regional grid (now a part of unified Indian Grid), as prescribed by Central Electricity Authority (CEA), country's apex power sector planning body, under the federal Government of India. In the absence of the project activity, same amount of electricity would have been delivered into the grid by the existing and fossil fuel-fired power plants. The current project activity, therefore, precludes the emission of greenhouse gases (GHGs) that would have resulted in the absence of this renewable energy-based power project activity.

Hence, Western regional grid has been considered for baseline emission calculations for the project activity.

Evidently, the pre-project scenario is same as the baseline scenario.

### **Estimated amount of emission reductions over the chosen crediting period:**

This project activity will lead to an annual average GHG emission reduction of 12,932 tCO<sub>2</sub>e and fixed crediting period is chosen by project participant.

### **Project activity's contribution towards sustainable development:**

The Designated National Authority (DNA) for the Government of India (GoI) in the Ministry of Environment, Forest and Climate Change (MoEFCC), called the National CDM Authority (NCDMA), has stipulated four indicators for sustainable development in the interim approval guidelines for CDM projects<sup>4</sup>:

### **Social well being**

The project activity contributes to the sustainable development by harnessing wind potential in Gujarat thereby decreasing the gap between demand and supply. The project activity directly contributes to the development of the area. It increases the average income of the local people and also the downstream activities associated with the Erection and commissioning (E&C) of wind power plants such as transportation, communication etc. The project activity thus strengthens the rural economy.

- The project activity would augment power supply in the region that would aid the local population.

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<sup>4</sup> <https://ncdmaindia.gov.in/>

- generate employment in the region during construction as well as operation of the project activity.
- It would lead to generation of employment and development of the region.
- It would augment power supply in the region that would aid the local population.

### **Economic well-being**

The project activity generates direct and indirect employment opportunities for skilled/semi-skilled manpower, during the construction and operational phase of the project. Indirect employment has been generated for the equipment supplier, contractors, and technical consultants. The project activity indirectly supports creation of local infrastructure like roads and other basic civic amenities leads to the economic development around the project area.

The project activity is displacing the grid electricity which is mostly fossil fuel based with wind power which is eco-friendly source of energy. Thus, the project activity results in reduction of GHGs. This contributes to the environmental well-being.

### **Technological well being**

The project activity leads to transfer of environmentally safe and sound technologies with a priority to the renewable sector or energy efficiency projects that are comparable to best practices in order to assist in up-gradation of technological base.

- The project activity will demonstrate the use of wind based electricity generation, which would serve as an example for other industries to replicate

**Environmental well-being:** Wind being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions.

Hence, the project activity is in line with the sustainable development criteria laid down by the MoEFCC<sup>5</sup>.

#### **A.1.1. Eligibility of the project under Gold Standard**

The project activity meets the eligibility criteria as per section 4 of GS4GG Principles & Requirements -v1.2<sup>6</sup> as described below:

- The project applies methodology AMS-I.D, Version 18.0<sup>7</sup> Sectoral Scope: 01, which is an approved methodology under Gold Standard.

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<sup>5</sup> Since June 2014, the name of India's Designated National Authority (DNA) for CDM changed from Ministry of Environment and Forests to Ministry of Environment, Forest and Climate Change

<sup>6</sup> [https://globalgoals.goldstandard.org/standards/101\\_V1.2\\_PAR\\_Principles-Requirements.pdf](https://globalgoals.goldstandard.org/standards/101_V1.2_PAR_Principles-Requirements.pdf)

<sup>7</sup> <https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK>

- The project type is power generation using Wind Energy which is an eligible project type as it is in accordance with 2.1.2 a) and 2.1.2 b) of the Eligible Project Types & Scope under Renewable Energy Activity Requirements.
- The project activity is Wind based and not specific Renewable Energy project types like Hydropower, projects using biomass resources etc., hence as per criteria 1.1.2 additional eligibility criteria are prescribed in Annex A (Additional criteria for specific renewable energy project types) of 200-GS4GG-Renewable-Energy-Activity-Requirements-v1.4 document is not applicable for the project activity.
- As per criteria 1.1.3 of 200-GS4GG-Renewable-Energy-Activity-Requirements-v1.4, the project activity conforms (a) Gold Standard for the Global Goals Principles & Requirements (and associated documents) AND (b) Gold Standard Renewable Energy Activity Requirements
- The project activity is not seeking the renewable Energy Labels, hence criteria 2.1.6 of VERs, hence 200-GS4GG-Renewable-Energy-Activity-Requirements-v1.4<sup>8</sup> document is not applicable for project activity.
- The project activity results in displacement of electricity from thermal power stations while contributing to sustainable development of India. Hence, the project contributes to the Gold Standard Vision and Mission.
- Wind power is an approved project type and does not require approval from Gold Standard.
- This project activity is not associated with geo-engineering or energy generated from fossil fuel or nuclear, fossil fuel switch, nor does it enhances or prolongs such energy generation.

General Eligibility Criteria under section 3 of Renewable Energy Activity Requirements Version 1.4

### **Eligible Project Types:**

- As per criteria 2.1.1 of GS4GG-Renewable-Energy-Activity-Requirements-v1.4, the project activity conforms (a) Gold Standard for the Global Goals Principles & Requirements AND (b) Gold Standard Renewable Energy Activity Requirements (and associated documents).
- As per criteria 2.1.2 of GS4GG-Renewable-Energy-Activity-Requirements-v1.4, the project activity conforms that
  - a. Project activity is generating and delivering electricity from non-fossil fuel and renewable energy sources.
  - b. Project activity involves renewable energy generation units in form of wind energy is supplying energy to a national grid.

Further since the project activity had been submitted for Preliminary Review before 24/01/2020 hence the project is exempted from demonstrating its compliance as per para 2.1.3 of RE Activity Requirements V 1.4<sup>9</sup>

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<sup>8</sup> <https://globalgoals.goldstandard.org/202-ar-renewable-energy-activity-requirements/>

<sup>9</sup> <https://globalgoals.goldstandard.org/202-ar-renewable-energy-activity-requirements/>

**Project Type:** As discussed above, the project type is eligible.

**Project Location:** The project is located in India. Further details have been provided in section A.4 of this report.

**Project scale:** The project activity is 9.6 MW Wind Energy project and thus qualifies under small scale projects.

This project activity is registered under the CDM mechanism and the UN reference no. is 4470<sup>10</sup>. The project activity is registered with CDM on 08/09/2011.

Further the project is not registered in any other mechanism, except CDM and is seeking registration in GS4GG under retroactive GSCER stream.

Further the CDM Crediting period of the project is from 08/09/2011 to 07/09/2021, thus the end date of crediting period under GS4GG will be same i.e. 07/09/2021.

#### **A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project**

**Rohit Surfactants Pvt. Limited. (RSPL)** is the project proponent (PP) of project activity and have the legal right to control and operate the project activities.

The project ownership has been demonstrated through below supporting documents:

1. **Commissioning certificates** – The letter from State Nodal Agency to Rohit Surfactants Pvt. Limited for commissioning of generation facility indicates that PP have the legal right to control and operate the project activities.
2. **Contract with EPC contractor** – The purchase EPC contract is the name of Wind World India Limited. It indicates that Rohit Surfactants Pvt. Limited is the project participant have the legal right to control and operate the project activities.

Based on above evidences, the project ownership is with **Rohit Surfactants Pvt. Limited.**

#### **A.2 Location of project**

The project activity is located in district Jamnagar, state of Gujarat, India.  
Village: Jamvadi & Navagam, Taluka : Kalavad

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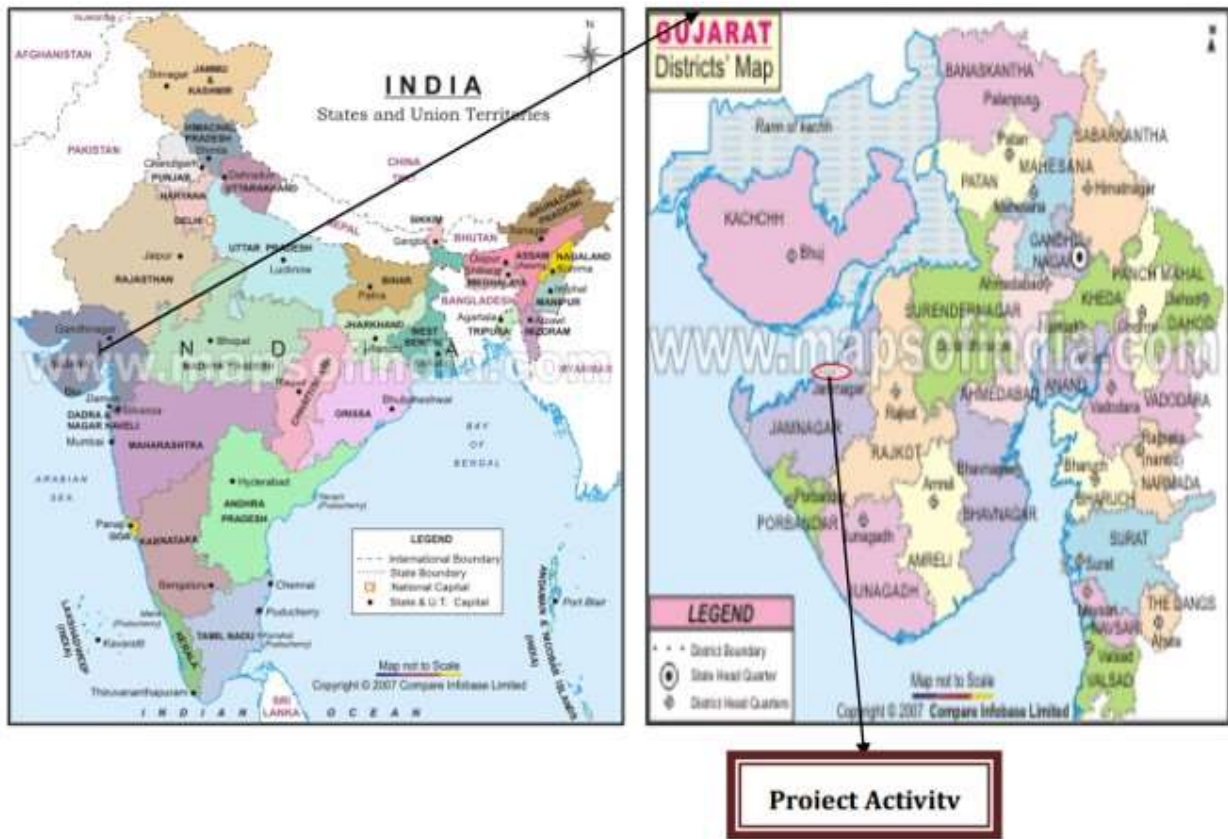
<sup>10</sup> <https://cdm.unfccc.int/Projects/DB/SIRIM1297157809.18/view>

The project activity consists of twelve WTGs each with capacity of 800 kW in the villages Jamvadi and Navagam in taluka Kalavad in district of Jamnagar in the state of Gujarat, India.

The specific geographical coordinates of the individual WTGs are as follows:

Sr No	Village	Taluka & District	WTG Id Commissioning	Latitude (N) (D° M' Sec")	Longitude (E) (D° M' Sec")
1	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0927	N22° 7' 13.2"	E70° 18' 39.3"
2	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0928	N22° 7' 19.5"	E70° 18' 39.5"
3	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0929	N22° 7' 25.8"	E70° 18' 36.1"
4	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0930	N22° 7' 32.3"	E70° 18' 36.2"
5	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0931	N22° 08' 12.1"	E70° 18' 20.2"
6	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0932	N22° 08' 18.1"	E70° 18' 18.4"
7	Jamvadi	Kalavad, Jamnagar	EIL/800/07-08/0933	N22° 08' 25.2"	E70° 18' 16.1"
8	Navagam	Kalavad, Jamnagar	EIL/800/07-08/01029	N22° 03' 27.6"	E70° 16' 53.9"
9	Navagam	Kalavad, Jamnagar	EIL/800/07-08/01030	N22° 53' 19.2"	E70° 16' 54.0"
10	Navagam	Kalavad, Jamnagar	EIL/800/07-08/01031	N22° 03' 14.4"	E70° 17' 01.8"
11	Navagam	Kalavad, Jamnagar	EIL/800/07-08/01032	N22° 03' 08.4"	E70° 17' 03.9"
12	Navagam	Kalavad, Jamnagar	EIL/800/07-08/01033	N22° 03' 02.4"	E70° 17' 06.3"

Map shows the exact location of the project activity.



### A.3 Technologies and/or measures

Since the capacity of the wind farm project is 9.6 MW, which is below the maximum qualifying capacity of 15 MW, the project falls under the UNFCCC small-scale CDM project activity categories under Type-I with project activity being renewable electricity generation for a grid.

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

Type: I -Renewable Energy Projects

Category: I.D "Grid connected renewable electricity generation"

As per paragraph 1 under Category I.D of Appendix B of the UNFCCC-defined simplified modalities and procedures (M&P) for small-scale CDM project activities (Version 18) Type I.D "comprises renewables, such as photovoltaics, hydro, tidal/wave, wind, geothermal, and biomass, that supply electricity to an electricity distribution system that is or would have been supplied by at least one fossil fuel or non-renewable biomass fired generating unit". The project is a grid-connected wind based power plant and qualifies as a Category I. D project activity.

The technology consists of conversion of the energy available in the wind flow to mechanical energy using a wind turbine. By connecting the turbine to a generator, the mechanical energy is converted into electricity energy. Therefore, in this process, there are no greenhouse gas emissions or burning of any fossil fuels. Thus electricity is generated through sustainable means without causing any negative effect on the environment and hence the technology is environmentally safe and sound.

The project employs the use of wind energy for the purpose of electricity generation. Since, the technology employed by the project proponent does not result in GHG emissions; the project does not cause any negative effects on the environment. Hence, the technology used for the project activities do not pose any threat to the environment when compared to the fossil fuel-fired power plants.

The project proponent uses proven technology for wind power generation. This technology is supplied by ENERCON India Ltd (EIL). The principle of wind energy is the conversion of kinetic energy in the wind into mechanical power at the rotor shaft. The rotor shaft is then coupled to the generator where it would be converted to electrical energy. These Enercon Make 800 kW WTGs feature variable speed and active pitch control. The Generator is flanged directly to the hub. This project activity generates 20.19 Million kWh of electricity per year

**WTG TECHNICAL DATA**

Turbine	Enercon
Rated Power	800 kW
No. of Blades	3
Blade Material	Glass Fibre reinforced Epoxy
Tower	Tubular
Turbine Type	Gearless horizontal
Power regulation	Independent electro-mechanical pitch system for each blade
Cut-in wind speed	3 m/s
Rated wind speed	12 m/s
Cutout wind speed	28 – 34 m/s
Extreme wind speed	59.5 m/s
Rated rotational speed	31.5 RPM
Operating range rot. Speed	16 – 31.5 RPM
Orientation	Upwind
Gear box type	Gear less
Generator type	Synchronous generator
Braking	Aerodynamics
Output voltage	400 V
Yaw system	Active yawing with 4 electric yaw drives with brake motor and friction bearing
Tower	Tubular

## Technology Transfer

No technology transfer from other countries is involved in the project.

### Plant Load Factor

Assumed PLF value has been taken from the Information memorandum and offer letter (which was submitted to bank for term loan) as per the guidelines EB 48 Annex 11. As per the DPR expected generation per WTG is taken is 16, 25,000 which results in PLF of 23.18% ( $=1625000 / (800 \text{ kW} * 365 \text{ Days} * 24 \text{ Hours})$ ).

## A.4 Scale of the project

The project is a small-scale project utilizing Wind Turbine Generators (WTG's) to generate electricity. The total installed capacity of the project is 9.6 MW which is below the threshold of small-scale project capacity (15 MW).

## A.5 Funding sources of project

There is no public funding from Annex 1 countries and no diversion of Official Development Assistance (ODA) involved in the project activity. The project is entirely funded by equity and term loan e thus no external funding sources have been used.

## SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

### B.1. Reference of approved methodology (ies)

**Methodology** : AMS-I.D. "Grid connected renewable electricity generation" (Version 18.0)<sup>11</sup>

**Tool** : "Tool to calculate the emission factor for an electricity system" (Version 07.0)<sup>12</sup>

This GS4GG PDD has been developed using the latest version of methodology AMS-I.D version 18.0. The registered CDM PDD has referred the AMS-I.D version 18.0.

The latest version of methodology is AMS-I.D version 18.0 and the project activity meets the applicability and eligibility criteria of latest version of methodology also.

It is to be noted that as per latest version of Tool to calculate the emission factor for an electricity system" (Version 07.0) and latest version of CO<sub>2</sub> Baseline Database for the

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<sup>11</sup> <https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTFQOQFQQH4SBK>

<sup>12</sup> <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

Indian Power Sector -Version 17.0) published by the Central Electricity Authority (CEA), Ministry of Power, Govt. of India, the combined margin emission factor is 0.9305 tCO<sub>2</sub>/MWh. However as per registered PDD, the combined margin emission factor is 0.9225 tCO<sub>2</sub>/MWh. Since emission factor as per the registered CDM PDD is lower than emission factor as per latest version of tool and CEA database, hence lower emission factor i.e 0.9225 tCO<sub>2</sub>/MWh as per registered CDM PDD is considered as a conservative approach. Hence the GS4GG PDD refers version of CEA database as per CDM registered PDD and does not referes the latest version of CEA database.

**B.2. Applicability of methodology (ies)**

Scope 01- Energy Industries (Renewable/non-renewable sources).  
 Approved small-scale baseline methodology AMS-I.D, version 18.0: "Grid connected renewable electricity generation."

The project activity generates power through a renewable source of energy (wind) and supplies it to the regional grid (now a part of unified Indian grid). This electricity would, otherwise, have been generated through fossil fuel sources connected to NEWNE<sup>13</sup> grid. The project activity meets the applicability conditions of the selected methodology.

Choice of selected methodology has been justified by showing that the project activity meets each applicability conditions of the selected methodology in table below:

Applicability conditions of AMS-I.D. (Version 18)	Eligibility of project under consideration
1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	The project activity involves the installation of a green-field wind project for renewable electricity generation. It would supply electricity to the regional grid that is primarily dominated with fossil fuel fired generating units; hence it satisfies this applicability condition through option (a)
2. Illustration of respective situations under which each of the methodology (i.e. AMS- I.D., AMS-I.F and AMS- I.A) applies is included in Table 2. <sup>14</sup>	The project activity would supply electricity to the INDIAN grid through Western regional grid, hence it satisfies this applicability condition.

<sup>13</sup> Now the Unified Indian Grid.

<sup>14</sup>

	Project type	AMS-I.A	AMS-I.D	AMS-I.F
1	Project supplies electricity to a national/regional grid		√	
2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)			√

<p>3. This methodology is applicable to project activities that (a) install a Greenfield plant (b)involve a capacity addition in (an) existing plant(s); (c)involve a retrofit of (an) existing plant(s); or (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) involve a replacement of (an) existing plant(s).</p>	<p>The project activity involves installation of a Greenfield power plant based on wind energy at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant). Hence, this applicability condition is satisfied .</p>
<p>4. Hydro power plants with reservoirs<sup>15</sup> that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <ul style="list-style-type: none"> <li>• The project activity is implemented in an existing reservoir with no change in the volume of reservoir.</li> <li>• The project activity is implemented in an existing reservoir<sup>16</sup> , where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m<sup>2</sup>;</li> <li>• The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m<sup>2</sup>.</li> </ul>	<p>The project activity is a wind power project. Hence this condition is not applicable to the project activity.</p>
<p>5. If the new unit has both renewable and nonrenewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable</p>	<p>The project has a total capacity of 9.6 MW. The unit has no non-renewable components; it also does not involve any co-firing or fossil-fuel; there is neither any provision for future addition</p>

3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)		√	
4	Project supplies electricity to a mini grid <sup>6</sup> system where in the baseline all generators use exclusively fuel oil and/or diesel fuel			√
5	Project supplies electricity to household users (included in the project boundary) located in off grid areas	√		

<sup>15</sup> A reservoir is a water body created in valleys to store water generally made by the construction of a dam.

<sup>16</sup> A reservoir is to be considered as an "existing reservoir" if it has been in operation for at least three years before the implementation of the project activity.

<p>component. If the new unit co-fires fossil fuel,<sup>17</sup> the capacity of the entire unit shall not exceed the limit of 15 MW.</p>	<p>of a non-renewable component as well as co-fired fossil fuel system. Thus, the project activity meets the applicability condition.</p>
<p>6. Combined heat and power (co-generation) systems are not eligible under this category.</p>	<p>The project activity is a Greenfield wind power project and does not involve cogeneration; hence this condition is not applicable to this project activity.</p>
<p>7. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct<sup>18</sup> from the existing units.</p>	<p>The project activity is a Greenfield wind power project and does not involve addition of renewable energy generation units at an existing renewable power generation facility. Hence, this condition is not applicable to the project activity.</p>
<p>8. In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW</p>	<p>This is a Greenfield wind power project and it does not include any retrofit, rehabilitation or replacement in an existing power plant/unit. Hence, this condition is not applicable to the project activity.</p>
<p>9. In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.</p>	<p>This is a Greenfield wind power project for electricity generation to supply electricity to regional grid; the project activity comes under Type I category of small-scale project as per definition in UNFCCC CDM. It does not involve landfill gas, waste gas, wastewater treatment and agro-industries projects. Hence the condition is not applicable to this project activity.</p>
<p>10. In case biomass is sourced from dedicated plantations, the applicability</p>	<p>This is a Greenfield wind power project and does not involve any use of</p>

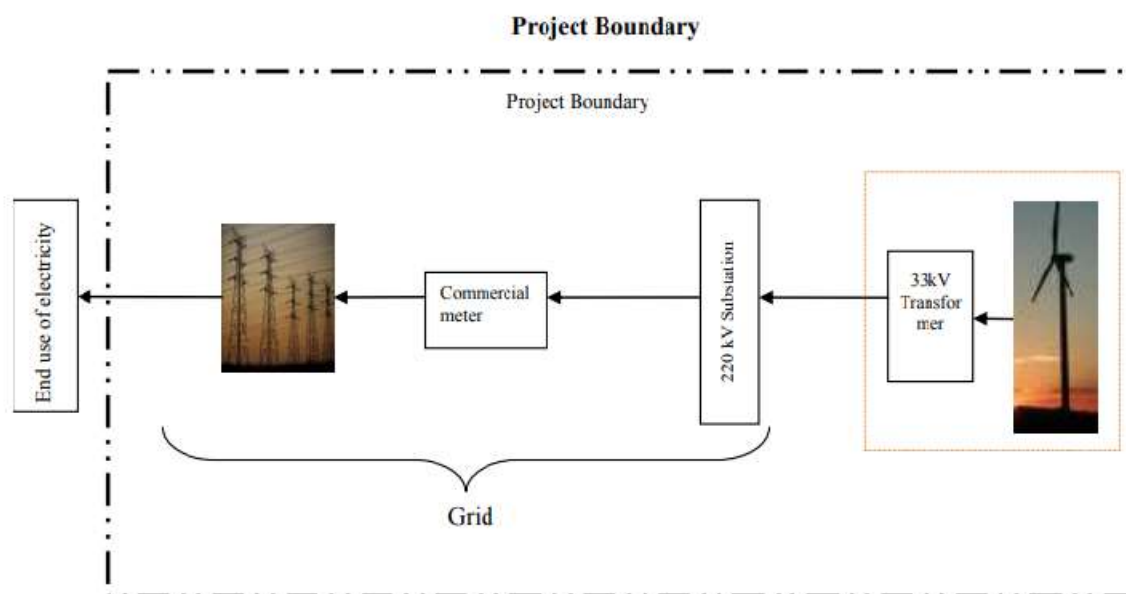
<sup>17</sup> A co-fired system uses both fossil and renewable fuels, for example the simultaneous combustion of both biomass residues and fossil fuels in a single boiler. Fossil fuel may be used during a period of time when the biomass is not available and due justifications are provided.

<sup>18</sup> Physically distinct units are those that are capable of generating electricity without the operation of existing units, and that do not directly affect the mechanical, thermal, or electrical characteristics of the existing facility. For example, the addition of a steam turbine to an existing combustion turbine to create a combined cycle unit would not be considered "physically distinct".

criteria in the tool “Project emissions from cultivation of biomass” shall apply.	biomass; hence this condition is not applicable to the project activity.
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### B.3. Project boundary

As per the guidelines mentioned in paragraph 18 of AMS I.D, the spatial extent of the project boundary includes the project power plant and all power plant connected physically to the electricity system<sup>19</sup> that the CDM project power plant is connected to. The project boundary is illustrated below



Source	GHGs	Included?	Justification/Explanation
Baseline Grid connected electricity generation.	CO <sub>2</sub>	Yes	Main emission source
	CH <sub>4</sub>	No	Minor emission source
	N <sub>2</sub> O	No	Minor emission source
	Other	No	No other emissions are emitted from the project
Project Greenfield Wind Power Project Activity.	CO <sub>2</sub>	No	No CO <sub>2</sub> emissions are emitted from the project
	CH <sub>4</sub>	No	Project activity does not emit CH <sub>4</sub>
	N <sub>2</sub> O	No	Project activity does not emit N <sub>2</sub> O

<sup>19</sup> Refer to the latest approved version of the Tool to calculate the emission factor for an electricity system. for definition of an electricity system.

		Other	No	Project activity does not emit other forms of GHG emissions
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#### B.4. Establishment and description of baseline scenario

According to the paragraph 19 of the methodology AMS-I.D. version 18.0, the baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

As per paragraph 22 of AMS-I.D. version 18.0, The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{BL,y} \times EF_{grid,y}$$

Where:

$$BE_y = \text{Baseline Emissions in year } y \text{ (tCO}_2\text{e)}$$

$$EG_{BL,y} = \text{Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year } y \text{ (MWh)}$$

$$EF_{grid,y} = \text{Combined margin CO}_2 \text{ emission factor for grid connected power generation in year } y \text{ calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO}_2\text{e/MWh)}$$

#### Calculation of $EG_{BL,y}$

The calculation of  $EG_{BL,y}$  is different for greenfield plants, capacity additions, retrofits, and replacements. For a greenfield plant, the calculation of  $EG_{BL,y}$  is given as

$$EG_{BL,y} = EG_{PJ, facility, y}$$

Where

$$EG_{PJ, facility, y} = \text{Quantity of net electricity generation supplied by the project plant/unit to the grid in year } y \text{ (MWh)}$$

This project activity being a greenfield plant,  $EG_{BL,y} = EG_{PJ, facility, y}$  and baseline emissions ( $BE_y$ ) is given by

$$BE_y = EG_{PJ, facility, y} \times EF_{grid,y}$$

As per paragraph 23, the Emission Factor can be calculated in a transparent and conservative manner as follows:

a) A combined margin (CM), consisting of the combination of Operating Margin (OM) and Build Margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system'.

OR

b) The weighted average emissions (in tCO<sub>2</sub>/MWh) of the current generation mix. The data of the year in which project generation occurs must be used."

The approach proposed in the "Option (a)" i.e. "Combined Margin" has been used for ascertaining baseline emissions and corresponding emission reductions.

As discussed above, the CDM Registered PDD have lower emission factor than the calculated value as per latest version of tool and CEA database, hence as a conservative approach, the emission factor calculation as per CDM registered PDD is mentioned.

The OM and BM emission factor have been considered from the information (CO<sub>2</sub> Baseline Database for the Indian Power Sector -Version 5.0) published by the Central Electricity Authority (CEA), Ministry of Power, Govt. of India. Considering the individual weightings assigned to the OM and the BM emission factors respectively, as prescribed in the 'Tool to calculate the emission factor for an electricity system (Version 7.0)', the combined margin emission factor for the NEWNE<sup>20</sup> Grid has been calculated.

### **Step 1: Identify the relevant electricity systems**

For determining electricity emission factors, a project electricity system is defined by the spatial extent of power plants that are physically connected through transmission and distribution lines to the project activity (e.g. the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints.

The Indian power system is divided into two regional grids, namely NEWNE and Southern grid (Now the Unified Indian Grid). Each grid covers several states. Power generation and supply within the regional grid is managed by Regional Load Dispatch Centre (RLDC). The Regional Power Committees (RPCs) provide a common platform for discussion and solution to the regional problems relating to the grid.

Each state in a regional grid meets their demand with their own generation facilities and also with allocation from power plants owned by the central sector such as NTPC and NHPC etc. Specific quotas are allocated to each state from the central sector power plants. Depending on the demand and generation, there are electricity exports and imports between states in the regional grid. There are also electricity transfers between regional grids, and small exchanges in the form of cross-border imports and exports (e.g. from Bhutan). Recently, the Indian regional grids have started to work in synchronous mode, i.e. at same frequency.

Keeping this into consideration, the Central Electricity Authority (CEA), Government of India has divided the Indian Power Sector into five regional grids viz. Northern, Eastern, Western, North-eastern and Southern.

However, since August 2006, however, all regional grids except the Southern Grid had been integrated and were operating in synchronous mode, i.e. at same frequency. Consequently, the Northern, Eastern, Western and North-Eastern grids were treated as a single grid named as NEWNE grid from FY 2007-08 onwards for the purpose of this CO<sub>2</sub> Baseline Database. As of 31 December 2013, the Southern grid has also been

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<sup>20</sup>Now the Unified Indian Grid.

synchronized with the NEWNE grid, hence forming one unified Indian Grid. Since the project supplies electricity to the Indian grid, emissions generated due to the electricity generated by the Indian grid as per CM calculations will serve as the baseline for this project. However, as the project activity refers to CEA CO<sub>2</sub> Baseline Database Version 5.0<sup>21</sup> in accordance with registered CDM PDD (UN ID 4470), CM grid emission factor is calculated considering the grid system prevailing during the time of applicability of CEA CO<sub>2</sub> Baseline Database Version 5.0.

**Table: Geographical Scope of Indian Electricity Grid**

Northern	Eastern	Western	North-Eastern	Southern
Chandigarh	Bihar	Chhattisgarh	Arunachal Pradesh	Andhra Pradesh
Delhi	Jharkhand	Gujarat	Assam	Rajasthan
Haryana	Orissa	Daman & Diu	Manipur	Kerala
Himachal Pradesh	West Bengal	Dadar & Nagar Haveli	Meghalaya	Tamil Nadu
Jammu & Kashmir	Sikkim	Madhya Pradesh	Mizoram	Telangana
Punjab	Andaman & Nicobar	Maharashtra	Nagaland	Puducherry
Rajasthan		Goa	Tripura	Lakshadweep
Uttar Pradesh				
Uttarakhand				

For the purpose of determining the emission reductions achieved by the Project the “Tool to calculate the emission factor for an electricity systems” (Version 7.0) states that the “project electricity system is defined by the spatial extent of the power plants that can be dispatched without significant transmission constraints”. On this basis the Central Electricity Authority, CO<sub>2</sub> Baseline Database for the Indian Power Sector - Version 5.0 defines the project electricity systems within India in two regional grids. This is justified “as electricity continues to be produced and consumed largely within the same region, as is evidenced by the relatively small volume of net transfers between the regions, and consequently it is appropriate to assume that the impacts of CDM project will be confined to the regional grid in which it is located”. The project is located

<sup>21</sup> [http://www.cea.nic.in/reports/others/thermal/tpece/cdm\\_co2/user\\_guide\\_ver5.pdf](http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver5.pdf)

in Gujarat and is therefore as per the CEA’s grid definitions it is within the Western regional grid (now a part of unified Indian grid). Also, it is preferable to take the regional grid as project boundary than the state boundary as it minimizes effect of inter state power transactions, which are dynamic and vary widely. Considering free flow of electricity among member states and the union territory the entire Southern grid is considered as a single entity for estimation of baseline.

**Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)**

Project participants may choose between the following two options to calculate the operating margin and build margin emission factor:

Option I: Only grid power plants are included in the calculation.

Option II: Both grid power plants and off-grid power plants are included in the calculation.

The project participant has chosen Option I for the calculation of the operating and build margin emission factor i.e. off-grid power plants are not being included in the calculation.

**Step 3: Select a method to determine the operating margin (OM)**

The calculation of the operating margin emission factor ( $EF_{grid, OM, y}$ ) is based on one of the following methods:

- (a) Simple OM, or
- (b) Simple adjusted OM, or
- (c) Dispatch data analysis OM, or
- (d) Average OM.

For the proposed project activity, simple OM method (option a) has been chosen to calculate the operating margin emission factor ( $EF_{grid, OM, y}$ ). However, the simple OM method can only be used if low- cost/must-run resources constitute less than 50% of total grid generation in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production. The low-cost/must-run resources are defined as power plants with low marginal generation costs or power plants that are dispatched independently of the daily or seasonal load of the grid. They typically include hydro, geothermal, wind, low-cost biomass, nuclear and solar generation.

Share of Low Cost / Must-Run (% of Net Generation)

Grid	2005-06	2006-07	2007-08	2008-09
NEWNE	18.0%	18.5%	19.0%	17.3%
South	27.0%	28.3%	27.1%	22.8%
India	20.1%	20.9%	21.0%	18.6%
Average of most recent 4 years (NEWNE grid)	18.2%			
Average of most recent 4 years (Southern Grid)	26.3%			

Ref: CO<sub>2</sub> Baseline Database for the Indian Power Sector – CEA, Version 04 and 05

The calculation above shows that the generation from low-cost/must-run resources constitutes less than 50% of total grid generation, hence usage of the Simple OM method in the project case is justified.

The Simple OM emission factor can be calculated using either of the two following data vintages for years(s) y:

- Ex ante option: If the ex ante option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the emissions factor during the crediting period is required. For grid power plants, use a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation. For off-grid power plants, use a single calendar year within the 5 most recent calendar years prior to the time of submission of the CDM-PDD for validation.

Or

- Ex post option: If the ex post option is chosen, the emission factor is determined for the year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring. If the data required to calculate the emission factor for year y is usually only available later than six months after the end of year y, alternatively the emission factor of the previous year (y-1) may be used. If the data is usually only available 18 months after the end of year y, the emission factor of the year preceding the previous year (y-2) may be used. The same data vintage (y, y-1 or y-2) should be used throughout all crediting periods.

The project proponent chooses the Ex ante option for estimating the simple OM emission factor wherein as described above a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation, without requirement to monitor and recalculate the emissions factor during the crediting period will be undertaken.

**Step 4: Calculate the operating margin emission factor according to the selected method**

The simple OM method has been selected as justified above. The simple OM emission factor is calculated based on the net electricity generation of each power unit and a CO<sub>2</sub> emission factor for each power unit, as follows:

$$EF_{grid,OM,simple,y} = \frac{\sum_m EG_{m,y} \cdot EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

Where:

$EF_{grid,OM,simple,y}$	=	Simple operating margin CO <sub>2</sub> emission factor of in year y (tCO <sub>2</sub> /MWh)
$EG_{m,y}$	=	Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)

$EF_{EL,m,y}$	=	CO <sub>2</sub> emission factor of power unit m in year y (tCO <sub>2</sub> /MWh)
m	=	All power units serving the grid in year y except low-cost / must-run power units
y	=	The relevant year as per the data vintage chosen in step 3 i.e. the three most recent years for which data is available at the time of submission of the CDM- PDD to the DOE for validation (ex ante option)

**Determination of  $EF_{EL,m,y}$**

The emission factor of each power unit m has been determined as follows:

$$EF_{EL,m,y} = \frac{\sum_m FC_{i,m,y} \cdot NCV_{i,y} \cdot EF_{CO_2,i,y}}{EG_{m,y}}$$

$EF_{EL,m,y}$	=	CO <sub>2</sub> emission factor of power unit m in year y (tCO <sub>2</sub> /MWh)
$FC_{i,m,y}$	=	Amount of fossil fuel type i consumed by power unit m in year y (Mass or volume unit)
$NCV_{i,y}$	=	Net calorific value (energy content) of fossil fuel type i in year y (GJ / mass or volume unit)
$EF_{CO_2,i,y}$	=	CO <sub>2</sub> emission factor of fossil fuel type i in year y (tCO <sub>2</sub> /GJ)
$EG_{m,y}$	=	Net electricity generated and delivered to the grid by power unit m in year y (MWh)
m	=	All power units serving the grid in year y except low-cost / must-run power units
i	=	All fossil fuel types combusted in power plant / unit m in year y
y	=	The relevant year as per the data vintage chosen in step 3 i.e. the three most recent years for which data is available at the time of submission of the CDM- PDD to the DOE for validation (ex-ante option)

**Determination of  $EG_{m,y}$**

Since, the calculations consider only grid power plants,  $EG_{m,y}$  should has been determined as per the data provided by the Central Electricity Authority (CEA) CO<sub>2</sub> Baseline Database for the Indian Power Sector.

In India, the Central Electricity Authority (CEA) has estimated the baseline emission factor for the power sector. This data has also been endorsed by the DNA and is the most authentic information available in the public domain. The details of same can be found on CEA website at

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

Operating Margin Estimation for NEWNE Grid

(tCO <sub>2</sub> /MWh)	
OM, 2006-07	1.0085
OM, 2007-08	0.9999
OM, 2008-09	1.0066
Average OM (EF <sub>grid, OM,y</sub> )	1.0049

**Step 5: Identify the group of power units to be included in the build margin**

The sample group of power units m used to calculate the build margin consists of either:

- a) The set of five power units that have been built most recently, or
- b) The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently.

Project proponents should use the set of power units that comprises the larger annual generation.

Since in India, the installed capacity and corresponding annual generation from power plants is quite high, the sample group containing set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently comprise the sample group with the larger annual generation. Thus, the sample group m consisting of option (b) is used for the estimation of build margin.

In terms of vintage of data, project proponents can choose between one of the following two options:

Option 1: For the first crediting period, calculate the build margin emission factor ex-ante based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period.

Option 2: For the first crediting period, the build margin emission factor shall be updated annually, ex- post, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available. For the second crediting period, the build margin emissions factor shall be calculated ex-ante, as described in option 1 above. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used.

The project proponent wishes to choose option 1.

**Step 6: Calculate the build margin emission factor**

The build margin emissions factor is the generation-weighted average emission factor (tCO<sub>2</sub>/MWh) of all power units m during the most recent year y for which power generation data is available, calculated as follows:

$$EF_{grid,BM, simple,y} = \frac{\sum_m EG_{m,y} \cdot EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

$EF_{grid, BM, y}$	=	Build margin CO <sub>2</sub> emission factor in year y (tCO <sub>2</sub> /MWh)
$EG_{m,y}$	=	Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)
$EF_{EL, m, y}$	=	CO <sub>2</sub> emission factor of power unit m in year y (tCO <sub>2</sub> /MWh)
m	=	Power units included in the build margin
y	=	Most recent historical year for which power generation data is available

Calculations for the Build Margin emission factor  $EF_{grid, BM, y}$  is based on the most recent information available on the plants already built for sample group m at the time of PDD submission. The sample group m consists of the power plant capacity additions in the electricity system that comprise 20 % of the system generation and that have been built most recently.

Build Margin Estimation for NEWNE Grid (tCO <sub>2</sub> e/ MWh)	
BM ( $EF_{grid, BM, y}$ ), 2008-09	0.6752

**Step 7: Calculate the combined margin emissions factor**

The combined margin emissions factor is calculated as follows:

$$EF_{CO_2} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

$EF_{grid,BM,y}$	=	Build margin CO <sub>2</sub> emission factor in year y (tCO <sub>2</sub> /MWh)
$EF_{grid,OM,y}$	=	Operating margin CO <sub>2</sub> emission factor in year y (tCO <sub>2</sub> /MWh)
$w_{OM}$	=	Weighting of operating margin emissions factor (%)
$w_{BM}$	=	Weighting of build margin emissions factor (%)

The following default values should be used for  $w_{OM}$  and  $w_{BM}$ :

- Wind and solar power generation project activities:  $w_{OM} = 0.75$  and  $w_{BM} = 0.25$  (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods.

- All other projects:  $w_{OM} = 0.5$  and  $w_{BM} = 0.5$  for the first crediting period, and  $w_{OM} = 0.25$  and  $w_{BM} = 0.75$  for the second and third crediting period, unless otherwise specified in the approved methodology which refers to this tool.

As mentioned before, the CEA has calculated the baseline emission factors for various regional grids in India according to the formulas specified above. As this is the most authentic information available in the public domain. The baseline emission factor used in the calculation of baseline emissions for the proposed project activity is being referred from the same for transparency and conservativeness<sup>22</sup>.

Combined Margin Estimation for NEWNE Grid (tCO <sub>2</sub> /MWh)	
Average OM (EF <sub>grid, OM, y</sub> )	1.0049
Weight of OM (w <sub>OM</sub> )	0.75
BM, 2009-10 (EF <sub>grid, BM, y</sub> )	0.6752
Weight of BM (w <sub>BM</sub> )	0.25
Combined Margin (EF <sub>grid, CM, y</sub> )	0.9225

The Combined Margin has been calculated using the "Tool to calculate the emission factor for an electricity system" Version 7.0. The Operating Margin (OM) and Build Margin (BM) emission factors have been considered from the information (CO<sub>2</sub> Baseline Database for the Indian Power Sector -Version 5.0) published by the Central Electricity Authority (CEA), Ministry of Power, Govt. of India which has been computed according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system', version 7.0. Considering the individual weightings assigned to the OM and the BM emission factors respectively, as prescribed in the 'Tool to calculate the emission factor for an electricity system (Version 7.0)', the combined margin emission factor for the NEWNE<sup>23</sup> Grid has been estimated at 0.9225 tCO<sub>2</sub>e/MWh.

It is to be noted that the grid emission factor as per latest version of 'Tool to calculate the emission factor for an electricity system.' Version 7.0 and as per latest CO<sub>2</sub> Baseline Database Version 17.0 for the Indian Power Sector prepared by Central Electricity Authority, the combined margin grid emission factor comes as 0.9305 tCO<sub>2</sub>/MWh. The value of grid emission factor 0.9225 tCO<sub>2</sub>/MWh mentioned in CDM registered PDD is lower than than grid emission factor as per latest data, hence lower value of 0.9225 tCO<sub>2</sub>/MWh as per the registered CDM PDD, CEA Database Version 5.0 is considered as grid emission factor for the GS4GG project activity.

## B.5. Demonstration of additionality

Please refer to section B.5<sup>24</sup> of the registered CDM PDD.

### B.5.1 Prior Consideration

Not Applicable as the project is a GSCER Project seeing retroactive registration

<sup>22</sup> <http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>

<sup>23</sup> Now the unified Indian Grid.

<sup>24</sup> <https://cdm.unfccc.int/filestorage/Y/8/C/Y8CFT1SH6G400V2K5EQAJ7MXIL3DWU/PDD%20version%202.2%20RSPL%20%20clean%20%20mode?t=MDR8cjhxbjdfDA18p0DcFW2b6vMWqMRvTQ6>

### B.5.2 Ongoing Financial Need

Since the project is seeking retroactive GS Registration and is not following Design Certification renewal, hence the ongoing financial need not to be demonstrated.

### B.6. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)
SDG 13- Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measures into national policies, strategies and planning	<p><b>Impact-</b> Emission Reductions</p> <p>13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)</p>
SDG 7- Ensure access to affordable, reliable, sustainable and modern energy for all	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	<p><b>Impact-</b> MWh of renewable energy generation</p> <p><b>Indicator:</b> 7.2.1 Renewable Energy share in total final energy consumption</p>
SDG 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<p>8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</p> <p>8.6: By 2020, substantially reduce</p>	<p><b>Impact-</b> Employment generated through project</p> <p><b>Indicator:</b> 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities</p> <p><b>Impact-</b> Number of trainings</p> <p><b>Indicator:</b> 8.6.1 Proportion of youth (aged 15-24 years) not in</p>

	the proportion of education, employment or youth not in training.	
	employment, education or training	

**B.6.1 Explanation of methodological choices/approaches for estimating the SDG Impact**

SDG Goal	Methodological choices/approaches for estimating the SDG outcome
<p><b>SDG 7 –Affordable and Clean Energy :</b> Ensure access to affordable, reliable, sustainable and modern energy for all</p>	<p><b>Measurement Method:</b> - Electricity produced and supplied to the grid is monitored through energy meter. Net electricity will be calculated by state electricity board and O&amp;M operator on monthly basis and provided in monthly report or equivalent. The other parameters used for net electricity supplied to grid are mentioned in monitoring plan.</p> <p><b>QA/QC Process:</b> This parameter is monitored monthly and value of parameter will be cross checked with invoices. The meters will be calibrated on regular frequency.</p>
<p><b>SDG 8 – Decent Work and Economic Growth:</b> Promote inclusive and sustainable economic growth, employment and decent work for all</p>	<p><b>Measurement Method:</b> - Training and employment generation is monitored through training records, staff register or letter from O&amp;M contractor for training and employment details or HSE/HR records</p> <p><b>QA/QC Process:</b> This parameter is based on records, data and no any QA/QC procedure required. The DOE can confirm this parameter with interview with PP or Site incharge or employees for training and employment generation.</p>
<p><b>SDG 13 – Climate Action :</b> Take urgent action to combat climate change and its impacts</p>	<p><b>Measurement Method:</b> - The emission reduction parameter is calculated as product of net electricity supplied to grid and grid emission factor. The grid emission factor is ex-ante parameter and determined based on data obtained from “CO<sub>2</sub> Baseline Database for Indian Power Sector” version 15, published by the Central Electricity Authority, Ministry of Power, Government of India. This is in line with “Tool to calculate the emission factor for an electricity system, version 7.0”. The emission reductions are calculated as per registered PDD and as per methodology requirement.</p> <p><b>QA/QC Process:</b> This parameter is calculated, and no any QA/QC procedure required.</p>

**B.6.2 Data and parameters fixed ex ante**

**SDG13 (Indicators 13.2.1)**

Data/parameter	<b>EF<sub>grid,OM,y</sub></b>
Unit	tCO <sub>2</sub> /MWh
Description	Operating Margin CO <sub>2</sub> emission factor in year y
Source of data	Referred from CO <sub>2</sub> Baseline Database for the Indian Power Sector prepared by Central Electricity Authority Version 5.0.
Value(s) applied	1.0050
Choice of data or Measurement methods and procedures	The operating margin emission factor has been published by CEA in accordance with the 'Tool to calculate the emission factor for an electricity system.' The option of ex ante calculation based on Simple Operating Margin Method have been applied using three years vintage data (2006-07, 2007-08 and 2008-09).
Purpose of data	Calculation of baseline emissions
Additional comment	This value is determined ex-ante and will be fixed for the crediting period.

Data/parameter	<b>EF<sub>grid,BM,y</sub></b>
Unit	tCO <sub>2</sub> /MWh
Description	Build Margin CO <sub>2</sub> emission factor in year y
Source of data	Referred from CO <sub>2</sub> Baseline Database for the Indian Power Sector prepared by Central Electricity Authority Version 5.0.
Value(s) applied	0.6752
Choice of data or Measurement methods and procedures	The build margin emission factor has been published by CEA in accordance with the 'Tool to calculate the emission factor for an electricity system.' The build margin is calculated as the average emissions intensity of the 20% most recent capacity additions in the grid based on net generation. The build margin has been taken corresponding to the year 2008-09, the latest year for which data is available.
Purpose of data	Calculation of baseline emissions
Additional comment	This value is determined ex-ante and will be fixed for the crediting period.

Data/parameter	$EF_{grid,CM,y}/EF_{CO2,grid,y}$
Unit	tCO <sub>2</sub> /MWh
Description	Combined Margin CO <sub>2</sub> emission factor in year y
Source of data	Estimated figure based on 75% of OM and 25% of BM values
Value(s) applied	0.9225
Choice of data or Measurement methods and procedures	The combined margin emission factor has been determined based on data published by the CEA, applying a 75% weightage for $EF_{grid, OM,y}$ and 25% for $EF_{grid,BM,y}$ in accordance with the 'Tool to calculate the emission factor for an electricity system.'
Purpose of data	Calculation of baseline emissions
Additional comment	The value is fixed ex-ante

### B.6.3 Ex ante estimation of SDG Impact

#### SDG 7: Affordable and Clean Energy

The project activity will generate Affordable and Clean Energy of 14,019 MWh per year.

#### SDG 8: Decent Work and Economic Growth

The project leads to employment opportunities and provides employment to around 10 persons.

Also, project activity improves the quality of employment by giving training to employee. Thus, 1 training per year will be conducted by the project activity.

#### SDG 13 – Climate Action

For a given year, the emission reductions contributed by the project activity ( $ER_y$ ) is calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where,

$ER_y$  = Emission Reduction in tCO<sub>2</sub>/year

$BE_y$  = Baseline emission in tCO<sub>2</sub>/year

$PE_y$  = Project emissions in tCO<sub>2</sub>/year

$LE_y$  = Leakage Emissions in tCO<sub>2</sub>/year

#### Baseline Emission ( $BE_y$ )

The baseline emissions are the product of electrical energy baseline  $EG_{BL,y}$  expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

$$BE_y = EG_{BL,y} * EF_{grid,y}$$

Where,

$EG_{BL,y}$  = Total quantity of net electricity delivered to the recipient facility

$EF_{grid,y}$  = Baseline emission factor  
= 0.9225 tCO<sub>2</sub>/MWh

$$BE_y = 14,019 * 0.9225$$

$$= 12,932 \text{ tCO}_2/\text{year}$$

$$\text{Since } ER_y = BE_y - PE_y - LE_y$$

$$= 12,932 - 0 - 0$$

Therefore,  $ER_y = 12,932 \text{ tCO}_2/\text{year}$

### B.6.4 Summary of ex ante estimates of each SDG Impact

#### SDG 7: Affordable and Clean Energy

Net generation per year=14,019 MWh/year

Year <sup>25</sup>	Baseline estimate	Project estimate	Net benefit
01/04/2020 to 31/03/2021	0	19,493	19,493
01/04/2021 to 07/09/2021	0	8,545	8,545
<b>Total</b>	<b>0</b>	<b>28,039</b>	<b>28,039</b>
<b>Total number of crediting years</b>	<b>2</b>		
<b>Annual average over the crediting period</b>	<b>0</b>	<b>14,019</b>	<b>14,019</b>

#### SDG 8: Decent Work and Economic Growth

The project leads to employment opportunities and will provide employment to minimum 10 persons.

Also, project activity improves the quality of employment by giving training to employee. Thus, 1 training per year will be conducted by the project activity.

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<sup>25</sup> Note -The crediting period start date is from 2 years back from GS registration date. The crediting period start date is estimated and will be changed as per the design certification date obtained from GS.

## SDG 13: Climate Action

The baseline emissions are the product of electrical energy baseline  $EG_{BL,y}$  expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

$$BE_y = EG_{BL,y} * EF_{grid,y}$$

Where,

$EG_{BL,y}$  = Total quantity of net electricity delivered to the recipient facility

$EF_{grid,y}$  = Baseline emission factor  
= 0.9225 tCO<sub>2</sub>/MWh

$$BE_y = 14,019 * 0.9225$$

$$= 12,932 \text{ tCO}_2/\text{year}$$

$$\text{Since } ER_y = BE_y - PE_y - LE_y$$

$$= 12,932 - 0 - 0$$

Therefore,  $ER_y = 17,983 \text{ tCO}_2/\text{year}$

Year <sup>26</sup>	Baseline estimate	Project estimate	Net benefit
01/04/2020 to 31/03/2021	17,982	0	17,982
01/04/2021 to 07/09/2021	7,883	0	7,883
<b>Total</b>	<b>25,865</b>	<b>0</b>	<b>25,865</b>
<b>Total number of crediting years</b>	<b>2</b>		
<b>Annual average over the crediting period</b>	<b>12,932</b>	<b>0</b>	<b>12,932</b>

### B.7. Monitoring plan

#### B.7.1 Data and parameters to be monitored

#### SDG 7 (Indicators 7.2.1)

Data / Parameter	$EG_{BL,y}$
Unit	MWh/annum
Description	Net Electricity supplied to the grid by the project activity in year y
Source of data	Electricity Share Certificate issued by GEDA or GETCO

<sup>26</sup> Note -The crediting period start date is from 2 years back from GS registration date. The crediting period start date is estimated and will be changed as per the design certification date obtained from GS.

Value(s) applied	14,019(estimated)
Measurement methods and procedures	<p>Net electricity generated will be calculated from the readings of export and import indicated by the main meter (220 kv substation meter) connected to the incoming feeder of GUVNL. The procedures for metering will be as per the provisions of the power purchase agreement. The WEGs of a single customer (RSPL in this case) at a particular site are connected to a cluster meter (33 kV) which in turn connects to a feeder that ultimately leads to the shared main GETCO meter at the 220 kV substation maintained by Enercon India Limited.</p> <p>Data monitoring takes place at the cluster meter (33 kV) and GETCO meter (220 kV) at the substation. The electricity metered at the GETCO meter is proportionally divided among the customers connected to the meter on the basis of the pro-rata readings taken at the cluster meter (33 kV). The emission reduction calculations are done on the basis of the GETCO Main meter reading (net electricity exported to the grid) after deducting imports from the grid as mentioned in the share certificate issued by GEDA on monthly basis.</p> <p>The net electricity supplied to the grid would be calculated as:  <math>EG_{BL,Y} = EG_{y,Export} - EG_{y,Import}</math></p>
Monitoring frequency	<p><b>Monitoring:</b> Continuous  <b>Measurement:</b> Hourly  <b>Recording:</b> Monthly</p>
QA/QC procedures	Annual calibration of all the meters will be undertaken and faulty meters will be duly replaced immediately.
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be kept for two years after the crediting period or from last issuance. The values shall be monitored ex-post and CERs will be calculated at actual.

### SDG 13 (Indicators 13.2.1)

Data / Parameter	<b>ER<sub>y</sub></b>
Unit	tCO <sub>2</sub> e/year
Description	Emission reductions achieved per year
Source of data	As per Estimated ER sheet. During the verification, the results shall be obtained from the Actual ER sheet.
Value(s) applied	19,932 (estimated)
Measurement methods and procedures	The baseline emissions are the product of electrical energy baseline $EG_{BL,Y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

Monitoring frequency	As per monitoring period
QA/QC procedures	Not Applicable
Purpose of data	To Monitor the SDG 13 Indicator
Additional comment	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of this project activity, whichever occurs later

**SDG 8 (Indicators 8.5.1)**

Data / Parameter	<b>Number of employment generation</b>
Unit	Number
Description	Number of people employed directly due to the project activity
Source of data	Plant records or The training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc The staff register/ HR records for income generation of staff/ HR Policies regarding health insurance/social security will be checked for staff income generation and company policy benefits.
Value(s) applied	10
Measurement methods and procedures	The total number of persons working in the plant would be calculated based on the daily log available at site.  This parameter also monitor number of men/women employed by the project activity. The project activity ensures that “equal pay for work of equal value” for both men and women and there is no any discrimination against women.  This parameter also monitors the income generation of the staff and company policy benefits like health insurance/social security etc.  "The employment covers number of men and number of women employed by the project activity. The job is of type temporary/permanent or skilled/unskilled, etc <sup>27</sup> . Also, it is ensued that peoples will get equal payment for

<sup>27</sup> The employment opportunities generated are local or temporary or permanent, and the same will be verified during the performance review of the project activity.

	<p>equal work. The payment will be based on work and no any gender inequality for payment for work of equal value.</p> <p>Further for unskilled jobs, local people will be given maximum preference and it will be ensured that presence is there all the time.</p>
Monitoring frequency	Monthly monitoring and annual compilation
QA/QC procedures	<p>The number of persons employed would be mentioned in the plant register, which can be crossed checked with attendance register.</p> <p>The information required for this parameter can be checked by VVB during site visit through interview with people or through relevant supporting documents.</p>
Purpose of data	To Monitor the SDG 8 Indicator
Additional comment	The data will be kept for two years after the crediting period or from last issuance

### SDG 8 (Indicators 8.6.1)

Data / Parameter	<b>Quality of Employment</b>
Unit	Number
Description	Training of Staff
Source of data	Plant records or The training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc
Value(s) applied	1 training per year
Measurement methods and procedures	Together with the technology supplier, the Project organise training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Monitoring frequency	Annual
QA/QC procedures	The training records for all the employees
Purpose of data	To Monitor the SDG 8 Indicator
Additional comment	The data will be kept for two years after the crediting period or from last issuance

It is to be noted here that as per the registered CDM PDD, other parameters such as  $EG_{y, \text{Export}}$ ,  $EG_{y, \text{Import}}$ ,  $EG_{y, \text{WEG}}$  and  $EG_{\text{CM}}$  are also a part of monitoring parameters, however these are not attributed to net power generations and emission reductions are being claimed for the net power exported to the grid. Hence these parameters are being excluded for further monitoring as a part of GS4GG Validation.

### **B.7.2 Sampling plan**

No sampling is required

### **B.7.3 Other elements of monitoring plan**

The purpose of the monitoring plan is to define the organizational structure of the monitoring team, monitoring practices, QA / QC procedures and archiving procedures. The monitoring plan aims to ensure that the emission reductions from the project activity are reported accurately and transparently.

### **Roles and Responsibilities of the Monitoring Team**

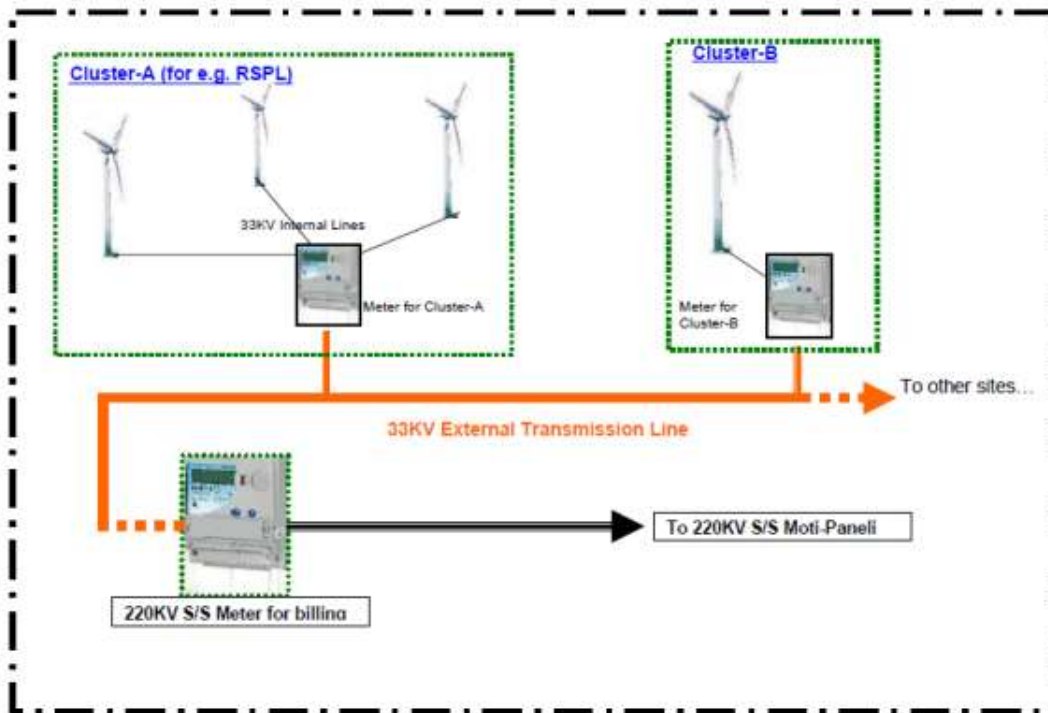
Monitoring of emission reductions will be carried out following the guidance provided in the applicable methodology for the project activity i.e. AMS-ID version 18, which requires monitoring of the parameter - Quantity of net electricity supplied to the grid from the project activity.

The general conditions set out for metering, recording, meter readings, meter inspections, Test & Checking and communication shall be as per the PPA (power purchase agreement) with GUVNL.

Reading and correction of meters:

- a) The WEGs of a single customer (RSPL in this case) at a particular site are connected to a 33 kV cluster meter which in turn connects to a feeder that ultimately leads to the shared main GETCO meter at the 220 kV substation. Data monitoring takes place at the 220 kV substation and at each WEG (through the SCADA system)
- b) Site technician will collect the generation readings from the WEGs every day and will prepare the daily generation report. Through these collective reports of everyday, monthly generation figures are available
- c) Cluster meter readings are also taken daily on the same day the WEG meter readings are taken to get the exact generation recording of these meter.
- d) On the billing day decided by GEDA/GETCO/EIL, the reading of the 220 kV substation meter is taken at the same time of daily WEG readings by calculating in the pro-rata basis, the generated units are being allocated to individual customers according to the generated units
- e) The emission reduction calculations are done on the basis of the GETCO Main meter reading (net electricity exported to the grid) after deducting imports from the grid as mentioned in the share certificate issued by GEDA on monthly basis. The following figure illustrates the metering arrangement for the RSPL project activity.

ELECTRICITY SHARE ALLOCATION PROCEDURE FOR WEC GENERATION



f) Whenever there is a major difference between the readings of the Main meter (220 kV substation meter and the 33kV cluster at Enercon Substation) at wind farm end, the following steps shall be taken.

i. Checking of CT and PT connections

ii. Testing of accuracy of meters at site and at GETCO meter (220 kV substation meter)  
If the difference exists even after such checking or testing, then the defective meter shall be replaced with a correct meter.

g) In case of conspicuous failures like burning of meter and erratic display of metered parameters and when the error found in testing of meter is beyond the permissible limit of error provided in the relevant standard, the meter shall be immediately replaced with a correct meter.

h) Sealing and maintenance of meters:

i. The GETCO meter (220 kV substation meter) shall be sealed in the presence of representatives of RSPL / Enercon and GETCO.

ii. Any meter seal(s) shall be broken only by the GETCO representative in the presence of Enercon/RSPLs representative whenever the main metering system or the 33kV metering system is to be inspected, tested, adjusted, repaired or replaced.

iii. The GETCO meter at the substation will be calibrated once in a year. The calibration of the meters installed in an individual WEG will take place on yearly basis in accordance with Enercon's operation & maintenance manual which is consistently followed at all Enercon sites across the world.

i) Records: Enercon will maintain an accurate and up-to-date operating log at the project site with records of:

i. 24 Hours logs of real and reactive power generation, frequency, transformer tap position, bus voltage(s), Main meter and other meter readings and any other data mutually agreed.

ii. Any unusual conditions found during operation/inspections

iii. All the records will be preserved for 2 years after the end of the crediting period.

j) The billing will be on monthly basis. Enercon/RSPL shall raise invoice and submit to GUVNL for payment based on joint meter reading as certified by GEDA at the end of each month for the energy supplied

k) Billing for the failure period:

i. In the event that any GETCO meter fails to register or upon being tested, is found not to be accurate within  $\pm 0.2$  class the energy injected in the grid, shall for the period be measured on the basis of the value registered by the corresponding meter at the feeder end.

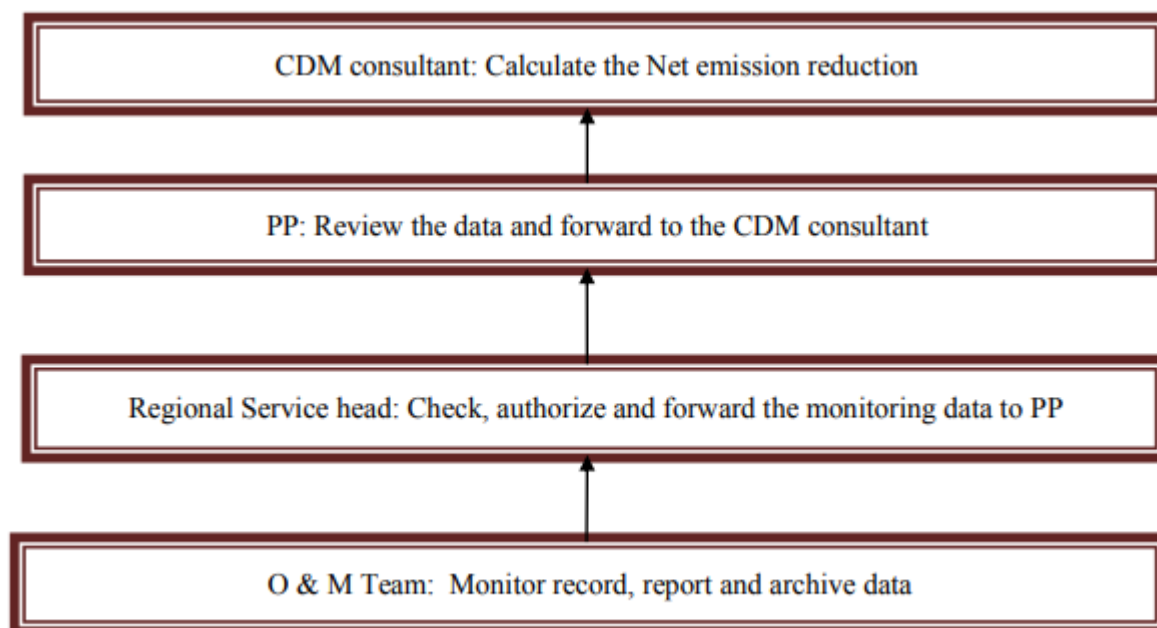
ii. In the event that both GETCO meter and the corresponding meter at the feeder end fail to register, or upon being tested, be found not to be accurate within  $\pm 0.2 / 0.5$  the energy injected in the grid, shall for the period be adjusted by immediately restoring and recalibrating the GETCO meter and the corresponding cluster meter (33 kV substation) at the meter and the correction applied to the consumption registered by the GETCO meter.

iii. The period referred to in the two points above is the actual period during which inaccurate measurements were made if such period can be determined or, if not readily determinable, the shorter of:

a) The period since the immediately preceding test of the relevant Main meter; or

b) One hundred and eighty (180) days immediately preceding the test at which the relevant Main meter was determined to be defective or inaccurate

The project is operated and managed by Enercon (India) Ltd. The operational and management structure is as under:



## SECTION C. DURATION AND CREDITING PERIOD

### C.1. Duration of project

#### C.1.1 Start date of project

25/04/2007

This date corresponds to the date of placement of purchase orders for the project activity.

#### C.1.2 Expected operational lifetime of project

20 Years 00 Months

### C.2. Crediting period of project

#### C.2.1 Start date of crediting period

01/04/2020 or the two years back from GS Registration date whichever is later. The project is seeking retroactive GS Registration and is expecting design certification date to be 01/04/2022, thus the start date of crediting period under GS4GG is to be considered to be from 01/04/2020 which is two years back from the design certification date.

#### C.2.2 Total length of crediting period

01 Year 04 Months

## SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

### D.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in [Appendix 1](#), There is no continued monitoring required for the safeguarding practices.

### D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

<p>Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?</p>	<p>As per Gold Standard Gender Policy, para 4.2, point (i) "Foundational gender-sensitive requirement – This strengthens Gold Standard’s ‘do no harm’ approach and addresses safeguards to prevent or mitigate adverse impacts on women or men and girls and boys. Such action is mandatory for all projects seeking Gold Standard certification and includes compliance with the gender ‘do no harm’ safeguards, gender gap analysis and gender sensitive stakeholder consultations."</p> <p>The project is a renewable Wind based project and it is not a gender sensitive project because the project does not adversely impact women or men. PP have HR policy which mention that, they do not differentiate between women and men. PP also conducted stakeholder meeting which was open for participation by all and both men and women had participated in the stakeholder meeting conducted. The HR policy of PP and the stakeholder meeting documents are submitted. Hence, it is established that, there is no gender discrimination by PP and that PP is strictly adhering with their policies.</p>
<p>Question 2 - Explain how the project aligns with existing country policies, strategies and best practices</p>	<p>India is party to "Convention on the Elimination of All Forms of Discrimination against Women" and the project is aligned with the labour policy. PP have HR policies in place which demonstrate that there is no gender discrimination. Also, PP is following best practices by having anti sexual harassment policy, whistle blower policy and CSR policy in place.</p>
<p>Question 3 - Is an Expert required for the Gender Safeguarding Principles &amp; Requirements?</p>	<p>The Project shall complete the following gender assessment questions below:</p> <p><b>1.</b> Is there a possibility that the Project might reduce or put at risk women’s access to or control of resources, entitlements and benefits?</p> <p>No, the project being a Wind project does not reduce access to or control of resources for women. Also,</p>

	<p>the PP have HR policy which clearly mention that women are treated equally.</p> <p><b>2.</b> Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?</p> <p>No, the project does not adversely affect men and women in marginalised or vulnerable communities. Employment opportunities have been provided by the PP to the local people from the nearby villages around the project site which in turn has improved the livelihood and living standards of the local people.</p> <p><b>3.</b> Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project’s activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?</p> <p>No, the HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender. The HR policy of PP is submitted.</p> <p><b>4.</b> Does the Project take into account gender roles and the abilities of women or men to benefit from the Project’s activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)?</p> <p>Yes, the project takes into account gender roles and abilities of women/men. PP has provided employment to both the genders without any discrimination. Also, the HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender.</p> <p><b>5.</b> Does the Project design contribute to an increase in women’s workload that adds to their care responsibilities or that prevents them from engaging in other activities?</p> <p>No, the project activity does not contribute to increase in women’s workload. The HR policy of PP mentions that all employees are given equal opportunities and also there is no discrimination. PP also have Anti sexual harassment policy for prevention of any sexual harassment and thus it can</p>
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	<p>be justified that the project contribute towards increased participation of women workload and promotes their active participation.</p> <p><b>6.</b> Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits?</p> <p>No, the project will not potentially reproduce or it will not deepen discrimination against women based on gender. The HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender. Thus it can be justified that, the project contribute towards increased participation of women workload and promotes their active participation.</p> <p><b>7.</b> Would the Project potentially limit women’s ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services?</p> <p>No, the project will not limit women’s ability to use, develop and protect natural resources. The HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender.</p> <p><b>8.</b> Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards?</p> <p>No, the project activity will not expose women and girls to further risk or hazards. The project does not involve in generation of Hazardous and Non-hazardous Waste. Standard health &amp; safety procedures are followed at site during operation and maintenance. PP follows the National Policy on Safety, Health and Environment at work<sup>28</sup>, published by Ministry of Labour and Employment, Government of India.</p>
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<sup>28</sup> <https://labour.gov.in/sites/default/files/SafetyHealthandEnvironmentatWorkPlace.pdf>

<p>Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?</p>	<p>Expert was not required to assist with Gender issues at the stakeholder consultation. As per para 4.4 of the Gender Policy, the PP had organised a stakeholder consultation meeting for which the local people were invited irrespective of the gender and the locals were invited for the stakeholder meeting through public notice which was accessible for both the genders. The stakeholder consultation documents are provided from which it can be seen that there was participation from both the genders. In order to get continuous feedback from the local stakeholders, PP has also placed a grievance register at the site, which is accessible to all irrespective of gender, for recording any grievance/feedback about the project. The comments received in the grievance register, shall be resolved by the team of PP at the earliest.</p>
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## SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

### **E.1 Summary of stakeholder mitigation measures**

The details of the Stakeholder Meetings are as follows:

Date of invitation – 11/10/2019

Date of Meeting – 20/10/2019

Location of Meeting - Jamvadi, Jamnagar district, Gujarat

The agenda of the meeting was as follows:

- Welcome Speech
- Introduction to Climate Change and Clean Development Mechanism
- Views expressed by the villagers
- Interactive session with the stakeholders
- Vote of Thanks

Due accounts of the meeting were taken and compiled. The stakeholders were presented, in vernacular, with an overview of the project activity as well as the technological, economic, environmental and social issues associated with it. The stakeholders were asked to come forward with their comments, suggestions and concerns regarding the project activity. The minutes of the meeting were duly recorded and attested by the project participant

### **Summary of comments received**

The physical Local stakeholder consultation was carried out on 20/10/2019 by inviting the local stakeholders through public notice. The notice was for all Local stakeholders and not a gender specific. Thus gender equality has been followed during consultation. Since project is developed in particular site, For project, the nearby local villagers are most relevant and who are directly and indirectly may be affected. Thus putting public

notice at project site/nearby village involves engagement of all stakeholders for the project activity. In order to consider gender aspects, a stakeholder feedback round was being organized by project owner at site which involved equal participation of both men and women who were being invited formally by placing notice at public places as well as personal invitations. Due consideration was being taken care to ensure participation of local people irrespective of any gender biasness. Thus stakeholder feedback round witnessed participation of both men and women from local community who expressed their comments or suggestions during the same.

During that physical stakeholder consultation, the project information was given and taken feedback for the project activity. The information about feedback register also given to stakeholders so that they can give their feedback at any time. Thus continuous input and Grievance Mechanism has been followed during first physical consultation. Finally, the feedback from stakeholders were being recorded about the project and stakeholders expressed their support to the project.

A summary of comments and queries from the project participants and the stakeholders are presented below:

<b>Comment / Query from Stakeholder</b>	<b>Response from Project Participant</b>
Will the project help in improving the electricity supply to the villagers or neighbourhood areas?	The power generated will be transmitted to the state electricity grid. The state electricity board distributes the power according to the amount of power at its disposal and the power demand.
Does this project affect the ground water level?	No the wind power project does not affect either ground water level or drinking water quality in the area.
Does this project affect rainfall in the area?	No wind power projects do not have any impact on rainfall. The WTG height is approximately 80 meters and the clouds bearing rainfall are usually at a higher altitude.

The stakeholders also expressed and acknowledged the socio-economic benefits of the project activity including improved infrastructure in the region, and employment opportunities for local residents.

The PP also placed a grievance register onsite in where the stakeholder can put down his/her complain and the same if found genuine will be addressed immediately.

### **Report on consideration of comments received**

No negative comments have been received on project activity from any of the local stakeholders consulted. As all comments were very positive about the project, no further action is required.

There were no further comments raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region. The local stakeholders expressed their support to the project.

The meeting was concluded by vote of thanks to all the participants.

Also the stakeholder feedback round was being initiated after the listing of the project activity at GS4GG.

### **Stakeholder feedback Round:**

The SFR for the project activity was being initiated on 27/04/2021 for 60 days after listing project with GS. The email was being sent to relevant stakeholders like NGOs, DNA officials, Gold Standard officials along with project documents.

The process for the SFR is as follows;

- E-mail and Invitations send to relevant stakeholders
- The non-technical summary of project activity along with Registered PDD, web link of UNFCCC web page for the same registered project in CDM, draft GS4GG PDD submission to relevant stakeholders, GS Public view section web link.
- Grievance Mechanism Feedback/Questions from Stakeholders

Answers for questions received from stakeholders during online SFR process.

### **Identification of Stakeholders:**

The Stakeholder feedback round will be conducted to consider and receive feedback from the possible stakeholders to the project, i.e. NGOs. Apart from these, the stakeholders as identified by Gold Standard Board, i.e. Gold Standard partnered NGOs in India and DNA of India (MoEFCC).

### **Invitations to Stakeholders:**

The Stakeholder feedback round will be done online method. Email invitations were sent to GS partnered NGO's and MoEFCC. The relevant documents of project activity like GS4GG PDD, project Technical summary were made available during Stakeholder feedback round.

As per GS toolkit, for SFR process physical meeting is not mandatory. Thus online e mail will be sent to NGOs, Govt officials, GS personnel etc.

The list of invites to whom the SFR e-mail has been sent will be mentioned. For local stakeholders, public notice has been put at project site. Also SFR process are mainly to cover the issues raised during local stakeholder consultation and there were no any negative comments raised during initial physical local stakeholder consultation.

Thus, public notice put at project site village and requested the feedback for this project activity as a part of SFR is sufficient and meets the requirement as per GS4GG. This public notice covers all local stakeholders for feedback during SFR process. The public notice has mentioned different feedback methods like the grievance register, telephone access, internet access so that local stakeholders can give their feedback for the project activity.

The Mandatory Continuous Input & Grievance Expression Methods applied are described in below section

**E.2 Final continuous input / grievance mechanism**

Method	Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers.
Continuous Input / Grievance Expression Process Book	Grievance Register to be maintained at office of PP and O&M site office at Project location.
Telephone access	Mr. Manish Dabkara, representative of Project Participant is responsible and his mobile number +91 9907534900 shall be available for any stakeholder comment.
Internet/email access	Email address: Manish Dabkara manish@enkingint.org Gold Standard: info@goldstandard.org
Nominated Independent Mediator (optional)	No Independent mediator is assigned. However, Mr. Manish Dabkara, has been assigned as the point of contact for all the local issues.
GS Contact (mandatory)	<a href="mailto:help@goldstandard.org">help@goldstandard.org</a>

## APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into [SECTION D](#) above. Please refer to the instructions in the [Guide to Completing](#) this Form.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potential y/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
<b>Principle 1. Human Rights</b>			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights.	No	<p>The Project is not in conflict with the economic livelihood of the local community.</p> <p>The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue.</p> <p>Further, the Project meets the local labour law requirements thus does not cause any human rights abuse.</p> <p>India has ratified the United Nations Human Rights Rules and regulations. The India ratified the same as per web link<sup>29</sup> given below.</p>	Not applicable

<sup>29</sup> [http://tbinternet.ohchr.org/\\_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN](http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN)

<p>2. The Project shall not discriminate with regards to participation and inclusion.</p>		<p>The project adheres to the host country's commitment to:</p> <p>Universal Declaration of Human Rights (UDHR) International Covenant on Economic, Social and Cultural Rights, India Accession 10/04/79<sup>30</sup></p> <p>International Covenant on Civil and Political Rights India Accession 10.04.79<sup>31</sup></p>	
<p><b>Principle 2. Gender Equality</b></p>			
<p>1. The Project shall complete the following gender assessment questions in order to inform Requirements 2-4, below:</p> <ul style="list-style-type: none"> <li>• Is there a possibility that the Project might reduce or put</li> </ul>	<p>No</p>	<p>The Project is not in conflict with the economic livelihood of the local community.</p> <p>No, the project being a Wind project does not reduce access to or control of resources for women. Also, the PP have HR policy which clearly mention that women are treated equally.</p> <p>No, the project does not adversely affect men and women in marginalised or vulnerable communities. Employment opportunities have</p>	<p>Not Applicable</p>

<sup>30</sup> <http://hrlibrary.umn.edu/research/ratification-india.html> and [http://tbinternet.ohchr.org/\\_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN](http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN)

<sup>31</sup> <http://hrlibrary.umn.edu/research/ratification-india.html> and [http://tbinternet.ohchr.org/\\_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN](http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN)

<p>at risk women's access to or control of resources, entitlements and benefits?</p> <ul style="list-style-type: none"> <li>• Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?</li> <li>• Is there a possibility that the Project might not take into account gender roles</li> </ul>		<p>been provided by the PP to the local people from the nearby villages around the project site which in turn has improved the livelihood and living standards of the local people.</p> <p>No, the HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender. The HR policy of PP is submitted.</p> <p>Yes, the project takes into account gender roles and abilities of women/men. PP has provided employment to both the genders without any discrimination. Also, the HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender.</p>	
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<p>and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?</p> <ul style="list-style-type: none"> <li>• Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project</li> </ul>		<p>No, the project activity does not contribute to increase in women's workload. The HR policy of PP mentions that all employees are given equal opportunities and also there is no discrimination. PP also have Anti sexual harassment policy for prevention of any sexual harassment and thus it can be justified that the project contribute towards increased participation of women workload and promotes their active participation.</p> <p>No, the project will not potentially reproduce or it will not deepen discrimination against women based on gender. The HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender. Thus, it can be justified that, the project contribute towards increased participation of women workload and promotes their active participation.</p> <p>No, the project will not limit women's ability to use, develop and protect natural resources. The HR policy of PP mentions that all employees are given equal opportunities for betterment irrespective of the gender.</p> <p>No, the project activity will not expose women and girls to further risk or hazards. The project does not involve in generation of Hazardous and</p>	
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<p>criteria ensure that it includes minority groups or landless peoples)?</p> <ul style="list-style-type: none"> <li>• Does the Project design contribute to an increase in women’s workload that adds to their care responsibilities or that prevents them from engaging in other activities?</li> <li>• Would the Project potentially reproduce or</li> </ul>		<p>Non-hazardous Waste. Standard health &amp; safety procedures are followed at site during operation and maintenance. PP follows the National Policy on Safety, Health and Environment at work<sup>32</sup>, published by Ministry of Labour and Employment, Government of India.</p> <p>The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women for Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.</p> <ul style="list-style-type: none"> <li>• Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.</li> <li>• Restriction of women’s rights or access to resources (natural or economic).</li> <li>• Recognise women’s ownership rights regardless of marital status – adopt project measures where possible to support to women’s access to inherit and own land, homes, and other assets or natural resources.</li> </ul>	
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<sup>32</sup> <https://labour.gov.in/sites/default/files/SafetyHealthandEnvironmentatWorkPlace.pdf>

<p>further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits?</p> <ul style="list-style-type: none"> <li>• Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in</li> </ul>		<p>Projects applies the principles of non-discrimination, equal treatment, and equal pay for equal work.</p> <p>The equitable participation of men and women is followed in the identified tasks/activities.</p> <p>The project activity ensures the participation of women or men in Project activities and they are getting benefits based on pregnancy, maternity/paternity leave, or marital status. These conditions does not limit the access of women or men, as the case may be, to Project participation and benefits.</p> <p>The project activity follows country's national gender strategy or equivalent national commitment to aid in assessing gender risks.</p>	
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<p>accessing and managing environmental goods and services?</p> <ul style="list-style-type: none"> <li>• Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards?</li> </ul> <p>2. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. Specifically, this shall include (not exhaustive):</p> <ul style="list-style-type: none"> <li>• Sexual harassment and/or any forms of violence</li> </ul>			
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<p>against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.</p> <ul style="list-style-type: none"> <li>• Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.</li> <li>• Restriction of women’s rights or access to resources (natural or economic).</li> <li>• Recognise women’s ownership rights regardless of</li> </ul>			
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<p>marital status – adopt project measures where possible to support to women’s access to inherit and own land, homes, and other assets or natural resources.</p> <p>3. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work specifically:</p> <ul style="list-style-type: none"> <li>• Where appropriate for the implementation of a Project, paid, volunteer work or community</li> </ul>			
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<p>contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities.</p> <ul style="list-style-type: none"> <li>• Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.</li> <li>• Ensure that these conditions do not limit the access of</li> </ul>			
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<p>women or men, as the case may be, to Project participation and benefits.</p> <p>4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)</p>			
<p><b>Principle 3. Community Health, Safety and Working Conditions</b></p>			
<p>The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community</p>	<p>No</p>	<p>The project is renewable energy technology (Wind based power generation Technology) and does not have exposure to increased health risks and shall not adversely affect the health of the workers and the community.</p> <p>Necessary health and safety measures will be taken during construction and operation phase, as well as throughout the operational lifetime of the project activity, also staffs will be trained to be able to work with high voltages and</p>	<p>Not Applicable</p>

		occupational health and safety. PP follows the National Policy on Safety, Health and Environment at work <sup>33</sup> , published by Ministry of Labour and Employment, Government of India.	
<b>Principle 4.1 Sites of Cultural and Historical Heritage</b>			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	<p>No cultural heritage is observed on the project site, thus no harm observed.</p> <p>Compliance with India's commitment to International Covenant on Economic, Social and Cultural Rights 10.04.79 will ensure no damage to critical cultural heritage.</p> <p>As per the list of cultural heritage sites in India<sup>34</sup> by UNESCO, it is clear that the project site is not a cultural heritage site</p>	Not Applicable
<b>Principle 4.2 Forced Eviction and Displacement</b>			
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	<p>The project has received the necessary approvals from the local authorities and does not lead to any resettlement.</p> <p>India (the Ministry of Rural development have the "Right to Fair Compensation and Transparency in</p>	Not Applicable

<sup>33</sup> <https://labour.gov.in/sites/default/files/SafetyHealthandEnvironmentatWorkPlace.pdf>

<sup>34</sup> <http://whc.unesco.org/en/statesparties/in>

		Land Acquisition, Rehabilitation and Resettlement Act”, 2013 <sup>35</sup>	
<b>Principle 4.3 Land Tenure and Other Rights</b>			
<p>1. Does the Project require any change to land tenure arrangements and/or other rights?</p> <p>2. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.</p>	No	<p>No Expropriation has been conducted on any private land involved in project activity. Land has been utilised by PP directly from the owner of the land through direct negotiation of commercial terms. There has not been involvement of any government agency in the acquiring the land. The land is acquired on mutual consent between private land owner and PP, thus there are no any issues of dissatisfaction of private land owner. The Project Developer hold uncontested land title for the entire Project Boundary to complete Project Design Certification. The land rights are with project developers.</p>	Not Applicable

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<https://dolr.gov.in/sites/default/files/Right%20to%20Fair%20Compensation%20and%20Transparency%20in%20Land%20Acquisition%2C%20Rehabilitation%20and%20Resettlement%20Act%2C%202013.pdf>

<b>Principle 4.4 Indigenous People</b>			
<p>The Gold Standard Certification requires that 3.4.12 The Project Developer shall identify all communities of Indigenous Peoples within the Project area of influence who may be affected directly or indirectly by the Project. 3.4.13 The Project Developer shall recognise and respect the indigenous people's collective rights to own, use, and develop and control the lands, resources and territories that they have traditionally owned, occupied or otherwise used or acquired, including lands and territories for which they do not yet possess title.</p>	<p>No</p>	<p>No indigenous people lived near the project site before the project implementation. The project is being developed in a barren land and no human settlement was present at project site prior to project implementation and thus no potential impact upon indigenous people can be envisaged.</p>	<p>Not Applicable</p>
<b>Principle 5. Corruption</b>			
<p>1. The Project shall not involve, be complicit in or inadvertently</p>	<p>No</p>	<p>The project is renewable energy technology (Wind based power generation Technology) and does not contribute to or reinforce corruption of any kind.</p>	<p>Not Applicable</p>

<p>contribute to or reinforce corruption or corrupt Projects</p>		<p>Indulgence in corruption is an illegal activity in the host country and the local labor compliance takes into account of the same.</p> <p>The project abides by the United Nations Convention Against Corruption. India ratification 09.05.11<sup>36</sup></p>	
<p><b>Principle 6.1 Labour Rights</b></p>			
<p>1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions where these are contradictory and a breach of one or</p>	<p>No</p>	<p>Forced labor is an illegal activity in the host country and the local labor compliance takes into account of the same. Further, India is a party to ILO and forced labour is illegal in India.</p> <p>The project does not employ any form of forced or compulsory labour. Employees can quit their Services at any time. The project complies with the Factories Act in India that prohibits forced or compulsory labour<sup>37</sup>.</p> <p>The project activity does not involve any child labour. There are number of trainings (soft and technical skills) planned for the employees.</p>	<p>Not Applicable</p>

<sup>36</sup> <http://www.unodc.org/unodc/en/treaties/CAC/signatories.html>

<sup>37</sup> <http://www.ilo.org/dyn/natlex/docs/WEBTEXT/32063/64873/E87IND01.htm>



<p>contract with provision for voluntary resignation by employee, AND</p> <p>f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.</p> <p>4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate.</p> <p>5. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable</p>		<p>The country have strict prohibition for child labour<sup>38</sup>. Thus project does not involve child labour during construction and operation of project activity.</p>	
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<sup>38</sup> [http://www.indianchild.com/child\\_labour\\_law\\_in\\_india.htm](http://www.indianchild.com/child_labour_law_in_india.htm)

<p>mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property as long as:</p> <p>(a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND</p> <p>(b) The tasks they perform do not harm their physical and mental development, AND</p> <p>(c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.</p> <p>6. The Project Developer shall ensure the use of</p>		<p>The project follows the health, safety and environment guidelines at project site. The project ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.</p>	
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<p>appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.</p>			
<p><b>Principle 6.2 Negative Economic Consequences</b></p>			
<p>1. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period. 2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in Project</p>	<p>No</p>	<p>The financial sustainability is demonstrated in registered PDD and these calculations are for entire lifetime of project activity.  The project does not involve any negative impacts and no any potential risk to local economy.</p>	<p>Not applicable</p>

design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalised social groups in targeted communities and that benefits are socially-inclusive and sustainable.			
<b>Principle 7.1 Emissions</b>			
Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The project is renewable energy technology (Wind based power generation Technology) and does not lead any increase in greenhouse gas emissions over the Baseline Scenario.	Not applicable
<b>Principle 7.2 Energy Supply</b>			
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	The project activity supplies energy to national grid and project activity displaces equivalent quantity of electricity which would have been generated by fossil fuel dominated grid connected power plants.	Not applicable
<b>Principle 8.1 Impact on Natural Water Patterns/Flows</b>			
Will the Project affect the natural or pre-existing	No	The project is renewable energy technology (Wind based power generation Technology) and	Not applicable

pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?		does not affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s).	
<b>Principle 8.2 Erosion and/or Water Body Instability</b>			
1. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2. 2. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	The project is renewable energy technology (Wind based power generation Technology) and does not affect Erosion and/or water body stability.	Not applicable
<b>Principle 9.1 Landscape Modification and Soil</b>			
Does the Project involve the use of land and soil for production of crops or other products?	No	The project proponent has implemented Environment Health Safety and Social guideline which takes into account the same.  The project activity involves barren land and does not involve use of land and soil for production of crops or other products.	Not applicable

		The project does not involve any landscape modification or soil. Hence there is no any impact of this principle.	
<b>Principle 9.2 Vulnerability to Natural Disaster</b>			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The project is renewable energy technology (Wind based power generation Technology). The Project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions. Thus, this section is Not Applicable.	Not Applicable
<b>Principle 9.3 Genetic Resources</b>			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	No	The project is renewable energy technology (Wind based power generation Technology). The Project not be negatively impacted by the use of genetically modified organisms or GMOs. Thus this section is Not Applicable	Not Applicable
<b>Principle 9.4 Release of pollutants</b>			
Could the Project potentially result in the release of pollutants to the environment?	No	The Power generation from Wind project is considered in white category that need not required any consent from the Pollution Control	Not Applicable

		<p>Board<sup>39</sup>, as it having zero pollutant release to environment. Further the EHSS guidelines takes into account the same.</p> <p>The project does not lead to release of any hazardous substances that pose threat to the environment. Rather it aims at reducing the air pollution that is prevalent due to use of fossil fuel power plants. The project promotes environmental protection through the use of cleaner technology. The project abides by the stipulations of the Indian Environment Protection Act 1986<sup>40</sup>.</p>	
<b>Principle 9.5 Hazardous and Non-hazardous Waste</b>			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The project is renewable energy technology (Wind based power generation Technology). The project does not involve generation of Hazardous and Non-hazardous Waste. Standard procedure is followed at site during operation and maintenance.	Not Applicable
<b>Principle 9.6 Pesticides &amp; Fertilisers</b>			
Will the Project involve the application of pesticides and/or fertilisers?	No	The project is renewable energy technology (Wind based power generation Technology). There are no any involvement of pesticides	Not Applicable

<sup>39</sup> [http://chocmms.nic.in/SPCB\\_DOCUMENTS/Categorisation.pdf](http://chocmms.nic.in/SPCB_DOCUMENTS/Categorisation.pdf) page 3

<sup>40</sup> <http://envfor.nic.in/legis/env/env1.html>

		and/or fertilisers. Thus this principle is Not Applicable.	
<b>Principle 9.7 Harvesting of Forests</b>			
Will the Project involve the harvesting of forests?	No	The project is renewable energy technology (Wind based power generation Technology). The project activity does not involve any harvesting of forests. Thus this principle is Not Applicable.	Not Applicable
<b>Principle 9.8 Food</b>			
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The project is renewable energy technology (Wind based power generation Technology). The Project does not modify the quantity or nutritional quality of food available. Thus this principle is Not Applicable	Not Applicable
<b>Principle 9.9 Animal husbandry</b>			
Will the Project involve animal husbandry?	No	The project is renewable energy technology (Wind based power generation Technology). The Project does not involve animal husbandry. Thus Not Applicable	Not Applicable
<b>Principle 9.10 High Conservation Value Areas and Critical Habitats</b>			
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The Project does not affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified.	Not Applicable

<b>Principle 9.11 Endangered Species</b>			
<p>1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?</p> <p>2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?</p>	<p>No</p>	<p>There are no any endangered species identified at project site and also no species have the route through area.</p> <p>The project activity does not impact other endangered species through transboundary affects.</p> <p>The project site is not on the migration route of migratory birds also. The project site is located in Uttar Pradesh. It is to be noted that there is no any migratory bird route over the project area. Same is evident from the attached figures of migratory bird route for India. Moreover, the area do not fall under any reserved forest and does not have rare or endangered species. Below is the link for scientific paper justifying the same.  <a href="http://wgbis.ces.iisc.ernet.in/energy/water/paper/TR123/section6.htm">http://wgbis.ces.iisc.ernet.in/energy/water/paper/TR123/section6.htm</a></p>	<p>Not Applicable</p>

## APPENDIX 2- CONTACT INFORMATION OF PROJECT PARTICIPANTS

Organization name	Rohit Surfactants Private Limited
Registration number with relevant authority	-
Street/P.O. Box	109/366,
Building	R.K.Nagar, G.T.Road
City	Kanpur
State/Region	Uttar Pradesh
Postcode	208012
Country	India
Telephone	91- 512 2551201
E-mail	<a href="mailto:sushilbajpai@gharidetergent.com">sushilbajpai@gharidetergent.com</a>
Website	<a href="http://www.gharidetergent.com/">http://www.gharidetergent.com/</a>
Contact person	Mr. Sushil Bajpai
Title	President (Corporate) & Company Secretary
Salutation	Mr.
Last name	Bajpai
Middle name	
First name	Sushil
Department	-
Mobile	-
Direct tel.	-
Personal e-mail	<a href="mailto:sushilbajpai@gharidetergent.com">sushilbajpai@gharidetergent.com</a>

## **APPENDIX 3- LUF ADDITIONAL INFORMATION**

Not Applicable as this project is generating electricity by using wind energy.

## **APPENDIX 4-SUMMARY OF APPROVED DESIGN CHANGES**

Not Applicable

## Revision History

Version	Date	Remarks
1.2	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an <a href="#">accompanying Guide</a> to help the user understand detailed rules and requirements
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1.0	10 July 2017	Initial adoption