



# WIND POWER PROJECT OF CLP WIND FARMS (INDIA) PRIVATE LIMITED AT JATH

Document Prepared by Apraava Renewable Energy Private Limited  
(AREPL)<sup>1</sup>

|                                  |                                                                                                                                                                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project title</b>             | Wind Power Project of CLP Wind Farms (India) Private Limited at Jath                                                                                                                                                                             |
| <b>Project ID</b>                | 1479                                                                                                                                                                                                                                             |
| <b>Monitoring period</b>         | 01/01/2023 to 31/12/2023 (both days inclusive)                                                                                                                                                                                                   |
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| <b>VCS Standard Version</b>      | 4.7                                                                                                                                                                                                                                              |
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<sup>1</sup> The name of the company has been changed from the CLP Wind Farm (India) Private Limited to Apraava Renewable Energy Private Limited (AREPL) with effect from 31/12/2021.

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# 1. PROJECT DETAILS

## 1.1 Summary Description of the Implementation Status of the Project

The project has been implemented by Apraava Renewable Energy Private Limited (AREPL) which is earlier known as CLP Wind Farms (India) Private Limited ("CLP") in the state of Maharashtra. The combined capacity of the project activity is 60 MW (30\*2) MW which is using Gamesa make 2 MW G97 Wind Turbine Generators (WTG). The project is located at Jath taluka, District: Sangli in the state of Maharashtra. The project activity utilises wind power to generate clean power with a view to bring in greenhouse gas emission reductions. The power generated from this project activity has been supplied to the Indian Integrated Grid System. The Project is fully commissioned and is supplying electricity to Integrated Indian Grid system.

The Project activity is a new facility (Greenfield) and the purpose of the project activity is to generate energy electricity by the utilization of wind velocity power and further selling the generated energy to the Indian Integrated Grid (same is now part of integrated Indian grid). In this process there is no consumption of any fossil fuel and hence the project does not lead to any greenhouse gas emissions. Thus, electricity has been generated through sustainable means without causing any negative impact on the environment.

The Project activity helps to reduce the demand- supply gap in the country and also helps in contributing to the sustainable development by using wind energy as the source of power generation and reduction of GHG emissions.

The first machine under this project activity was commissioned on 26-03-2014 and last machine was commissioned on 31-03-2014.

During this monitoring period the project activity has exported 99,693.84 MWh of net energy to the Integrated Indian Grid system. Initially, the Indian electricity system is divided into two regional grids, the synchronous Northern, Eastern, Western, and North Eastern (NEWNE) grid and the Southern grid. Each grid covers several states. However, Govt. of India has decided to integrate all the regional grid systems and thus, regional grids do not exist now. Thus, now the project activity is connected to Integrated Indian Grid system.

The total emission reductions achieved during the monitoring period from 01/01/2023 to 31/12/2023 (both days inclusive) is 97,400 tCO<sub>2</sub>.

## 1.2 Audit History

| Audit type | Period | Program | Validation/verification body name | Number of years |
|------------|--------|---------|-----------------------------------|-----------------|
|------------|--------|---------|-----------------------------------|-----------------|

|                             |                             |     |                                                |                       |
|-----------------------------|-----------------------------|-----|------------------------------------------------|-----------------------|
| Validation/<br>Verification | 26/03/2014 -<br>01/08/2015  | VCS | Bureau Veritas<br>Certification Holding<br>SAS | 1 year, 4<br>months   |
| Verification                | 02/08/2015 -<br>01/10/2016  | VCS | Earthood Services<br>Private Limited           | 1 year, 2<br>months   |
| Verification                | 02/10/2016 -<br>31/10/2017  | VCS | LGAI Technological<br>Center, S.A. (Applus+)   | 1 year, 30<br>days    |
| Verification                | 01/11/2017 -<br>31/12/2018  | VCS | Earthood Services<br>Private Limited           | 1 year, 2<br>months   |
| Verification                | 01/01/2019 -<br>30/09/2020  | VCS | Earthood Services<br>Private Limited           | 1 year, 9<br>months   |
| Verification                | 01/10/2020 -<br>30/09/2021  | VCS | LGAI Technological<br>Center, S.A. (Applus+)   | 1 year                |
| Verification                | 01/10/2021 to<br>31/12/2022 | VCS | LGAI Technological<br>Center, S.A. (Applus+)   | 1 year, 3<br>months   |
| Verification                | 01/01/2023 to<br>31/12/2023 | VCS | EcoLance Private<br>Limited                    | 1 year                |
| Total                       | 26/03/2014 -<br>31/12/2023  | VCS |                                                | 9 years, 9<br>months, |

### 1.3 Sectoral Scope and Project Type

|                             |                                                          |
|-----------------------------|----------------------------------------------------------|
| Sectoral scope <sup>2</sup> | 1 Energy Industries (renewable -/ non renewable sources) |
| Project activity type       | I, Renewable energy project                              |

### 1.4 Project Proponent

|                   |                                                                         |
|-------------------|-------------------------------------------------------------------------|
| Organization name | Apraava Renewable Energy Private Limited (AREPL)                        |
| Contact person    | Raghavendra Madaiah                                                     |
| Title             | Head – Non-Utility Markets (Renewables)                                 |
| Address           | 7th Floor, FULCRUM, Sahar Road, Andheri (East), Mumbai – 400 099. India |
| Telephone         | +91-22 67588888                                                         |
| Email             | carbongroup@apraava.com                                                 |

<sup>2</sup> Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: <https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes>

## 1.5 Other Entities Involved in the Project

|                     |                |
|---------------------|----------------|
| Organization name   | Not Applicable |
| Role in the project | Not Applicable |
| Contact person      | Not Applicable |
| Title               | Not Applicable |
| Address             | Not Applicable |
| Telephone           | Not Applicable |
| Email               | Not Applicable |

## 1.6 Project Start Date

|                    |                                                                                 |
|--------------------|---------------------------------------------------------------------------------|
| Project start date | 26-03-2014                                                                      |
| Justification      | The date of commissioning of the first WTG installed under the project activity |

## 1.7 Project Crediting Period

|                                                       |                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Crediting period                                      | <input type="checkbox"/> Seven years, twice renewable<br><input type="checkbox"/> Ten years, fixed<br><input checked="" type="checkbox"/> Other: 10 years (Renewable Twice)<br>Note: As per the registered VCS PD, the crediting period is 10 year which can be renewed twice. |
| Start and end date of first or fixed crediting period | 26-03-2014 to 25-03-2024 (both days inclusive).                                                                                                                                                                                                                                |

## 1.8 Project Location

The project activity is located at Achakanhali, Amrutwadi, Devnal, Jath, Khojanwadi, Mendhegiri, Salekiri, Untawadi and Valsang in the distt. of Maharashtra in India. The location details of project activity are given in below table:

| Sr. No. | Location No. | Gut. No   | Village       | Latitude          | Longitude         |
|---------|--------------|-----------|---------------|-------------------|-------------------|
| 1       | J97/2-110    | 58        | Untwadi       | 16° 58' 55.776" N | 75° 15' 50.148" E |
| 2       | J97/2-87     | 67/1      | Untwadi       | 16° 58' 59.664" N | 75° 15' 21.78" E  |
|         |              | 67/2/2    |               |                   |                   |
| 3       | J97/2-114    | 61        | Untwadi       | 16° 59' 11.652" N | 75° 15' 50.544" E |
| 4       | J97/2-41     | 218       | Khojanwadi    | 16° 57' 17.424" N | 75° 16' 38.352" E |
|         | J97/2-42     |           |               | 16° 57' 33.3" N   | 75° 16' 38.208" E |
| 5       | J97/2-16     | 173       | Khojanwadi    | 16° 57' 52.884" N | 75° 16' 9.3" E    |
| 6       | J97/2-91     | 144/1     | Menthagiri    | 17° 0' 11.124" N  | 75° 13' 26.976" E |
|         |              | 144/2     |               |                   |                   |
| 7       | J97/2-132    | 34/3      | Devnal        | 17° 1' 12.36" N   | 75° 15' 55.62" E  |
| 8       | J97/1-165    | 16/2      | Amrutwadi     | 17° 3' 5.256" N   | 17° 3' 5.256" N   |
| 9       | J97/1-102    | 133/2A    | Jath          | 17° 4' 44.652" N  | 75° 15' 51.12" E  |
| 10      | J97/1-147    | 120/1/3   | Jath          | 17° 4' 25.608" N  | 75° 15' 11.304" E |
|         |              | 120/1/4   |               |                   |                   |
| 11      | J97/1-190    | 125/2     | Jath          | 17° 4' 18.264" N  | 75° 15' 41.904" E |
| 12      | J97/1-231    | 86/6      | Achakanhal li | 17° 5' 51.072" N  | 75° 14' 50.172" E |
| 13      | J97/1-114    | 88        | Achakanhal li | 17° 3' 57.492" N  | 75° 15' 38.952" E |
| 14      | J97/1-173    | 239/2     | Valsang       | 17° 5' 2.976" N   | 75° 17' 12.408" E |
| 15      | J97/1-185    | 68        | Achakanhal li | 17° 6' 17.928" N  | 75° 15' 25.74" E  |
| 16      | J97/1-164    | 138       | Jath          | 17° 4' 56.82" N   | 17° 4' 56.82" N   |
| 17      | J97/1-239    | 343       | Salagiri      | 17° 2' 33.18" N   | 75° 17' 48.084" E |
| 18      | J97/2-161    | 47/1      | Mendhegiri    | 16° 59' 16.404" N | 75° 14' 40.56" E  |
|         |              | 48/3      |               |                   |                   |
| 19      | J97/1-197    | 146/2A/1  | Jath          | 17° 5' 16.944" N  | 75° 15' 48.132" E |
|         |              | 146/2B    |               |                   |                   |
|         |              | 146/2A/2A |               |                   |                   |
| 20      | J97/1-227    | 167       | Jath          | 17° 5' 8.736" N   | 75° 16' 6.672" E  |
| 21      | J97/1-163    | 253       | Valsang       | 17° 4' 47.604" N  |                   |

| Sr. No. | Location No. | Gut. No        | Village          | Latitude          | Longitude         |
|---------|--------------|----------------|------------------|-------------------|-------------------|
|         |              | 256            |                  |                   | 75° 17' 14.604" E |
| 22      | J97/2-145    | 24/1           | Untwadi          | 17° 0' 33.3" N    | 75° 16' 43.968" E |
| 23      | J97/1-228    | 384            | Salekari         | 17° 2' 59.28" N   | 75° 17' 59.388" E |
| 24      | J97/2-129    | 10/B<br>9/2B/2 | Devnal           | 17° 0' 31.032" N  | 75° 15' 39.672" E |
| 25      | J97/1-226    | 96/1           | Achakanhal<br>li | 17° 5' 28.896" N  | 75° 15' 16.56" E  |
| 26      | J97/1-166    | 210<br>269     | Valsang          | 17° 4' 33.888" N  | 75° 17' 14.82" E  |
| 27      | J97/2-128    | 49             | Untwadi          | 16° 59' 0.42" N   | 75° 16' 14.232" E |
| 28      | J97/2-119    | 88/4           | Untwadi          | 16° 58' 31.476" N | 75° 16' 1.416" E  |
| 29      | J97/1-248    | 147            | Salagiri         | 17° 1' 18.264" N  | 75° 17' 22.416" E |
| 30      | J97/1-114    | 215            | Jath             | 17° 3' 57.492" N  | 75° 15' 38.952" E |

## 1.9 Title and Reference of Methodology

| Type<br>(methodology,<br>tool or module). | Reference ID, if<br>applicable | Title                                                           | Version |
|-------------------------------------------|--------------------------------|-----------------------------------------------------------------|---------|
| Methodology                               | ACM0002                        | Grid-connected electricity generation from renewable sources    | 16.0    |
| Tool                                      | NA                             | Tool to calculate the emission factor for an electricity system | 04.0    |
| Tool                                      | NA                             | Tool for the demonstration and assessment of additionality      | 07.0.0  |
| Guideline                                 | NA                             | Methodological tool for Investment analysis                     | 16.0    |

## 1.10 Double Counting and Participation under Other GHG Programs

### 1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

### 1.10.2 Registration in Other GHG Programs

Is the project registered or seeking registration under any other GHG programs?

☐ Yes ☒ No

## 1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

### 1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit?

☐ Yes ☒ No

### 1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system?

☐ Yes ☒ No.

### 1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

## 1.12 Sustainable Development Contributions

Ministry of Environment and Forests has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. The project contributes to sustainable development using the following ways.

**Social well-being:** The project has helped in generating employment opportunities during the construction and operation phases. The project activity leads to development in infrastructure in the region like development of roads and also may promote business with improved power generation.

**Economic well-being:** The project is a clean technology investment in the region, which would not have been taken place in the absence of the VCS benefits the project activity also helped to reduce the demand supply gap in the state.

**Technological well-being:** The successful operation of project activity leads to promotion of wind based power generation and encouraged other entrepreneurs to participate in similar projects

**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. The project activity has generated power using zero emissions wind-based power generation which helps to reduce GHG emissions and specific pollutants like SO<sub>x</sub>, NO<sub>x</sub>, and SPM associated with the conventional thermal power generation facilities. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions.

Table 1: Sustainable Development Contributions

| Row number | SDG target | SDG indicator                                                       | Net impact on SDG indicator                                    | Current project contributions                                                                                                                                                         | Contributions over project lifetime                                                                                                                                                                       |
|------------|------------|---------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1)         | 7.2        | 7.2.1: Renewable energy share in the total final energy consumption | Implemented activities to increase                             | About <b>99,693.84 MWh</b> renewable electricity has been supplied to Indian grid during the reported period that helps to increase the renewable energy share.                       | Overall, <b>1,056,564.8 MWh</b> renewable electricity has been supplied to Indian grid throughout the project lifetime that helps to increase the renewable energy share in the energy mix                |
| 2)         | 8.6        | 8.6.1: Quality of Employment                                        | Plant records or training records for employees/O&M Contractor | 1 Training has been provided during first verification period, The training was organized for staff on the technology, plant operation, emergency and safety procedure.               | Overall, at least 1 Training has been provided each year throughout the entire crediting period, the training was organized for staff on the technology, plant operation, emergency and safety procedure. |
| 3)         | 13.0       | Tonnes of greenhouse gas emissions avoided or removed               | Implemented activities to increase                             | By supplying <b>99,693.84 MWh</b> of clean electricity to Indian grid, the project avoided release of <b>97,400 tCO<sub>2</sub>e</b> into the atmosphere during the reporting period. | Overall, prevented the release of <b>1,032,257 tCO<sub>2</sub>e</b> into the atmosphere since project commissioning.                                                                                      |

### 1.13 Commercially Sensitive Information

The project activity is a greenfield wind power project. Hence, there is no commercially sensitive information so this section is not applicable.

## 2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

### 2.1 Stakeholder Engagement and Consultation

#### 2.1.1 Stakeholder Identification

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stakeholder Identification</b>                  | <p>Following stakeholders have been identified for this project activity</p> <ul style="list-style-type: none"> <li>a) Representatives from O&amp;M contractor;</li> <li>b) Employees of CLPWFPL;</li> <li>c) Contractor of CLPWFPL;</li> <li>d) Villagers from nearby villages</li> </ul>                                                                                                                                                                       |
| <b>Legal or customary tenure/access rights</b>     | <p>The project activity is a greenfield wind power project and it has not involved any legal or customary tenure/access rights to territories and resources. So, this section is not applicable</p>                                                                                                                                                                                                                                                              |
| <b>Stakeholder diversity and changes over time</b> | <p>Stakeholders identified for this project activity are diverse in nature – in terms of socio-economic status, age and gender wise and the diversity is unlikely to change over time.</p>                                                                                                                                                                                                                                                                       |
| <b>Expected changes in well-being</b>              | <p>Expected changes</p> <ol style="list-style-type: none"> <li>1. Economic well-being – the project activity is likely to provide employments to the locality thus economic well beings are expected</li> <li>2. Environmental well-being – as this project activity 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</li> </ol> |

|                          |                                                                                                                                                                                    |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | significant amount of GHG emissions and specific pollutants like SO <sub>x</sub> , NO <sub>x</sub> , and SPM associated with the conventional thermal power generation facilities. |
| Location of stakeholders | Location of stakeholders<br><br>Village: Kumbhari, Dist. Sangli.<br><br>State: Maharashtra                                                                                         |
| Location of resources    | Not applicable.                                                                                                                                                                    |

## 2.1.2 Stakeholder Consultation and Ongoing Communication

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ongoing consultation                | Stakeholders' consultation is a continuous process and hence a feedback register is kept at the project site office where any stakeholder can come and share his/her feedback. The feedback irrespective of the type is taken care by PP with utmost priority.                                                                                                                                                                                                                                                                                                                                     |
| Date(s) of stakeholder consultation | 08/01/2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Communication of monitored results  | <p>The meeting was outlined towards making aware local stakeholders including local community, local administration representatives, NGOs working for environmental cause etc., about the project activity that involves electricity generation with the primary objective of reducing emissions of GHG emission in compared to pre-project or baseline scenario.</p> <p>The feedbacks/comments received from stakeholders were quite positive and no negative comments were received. The questions asked by stakeholders were only on process and these ere explained by PP representatives.</p> |
| Consultation records                | Stakeholder consultation documents/MoM/Grievance register                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Stakeholder input                   | Local villagers from nearby village appreciated the project activity. They expressed their gratitude towards the project developers and project proponents for providing different facilities. They also anticipating such positive initiatives would be taken by PP in the region. Other villagers mentioned about the job opportunities in local area due to                                                                                                                                                                                                                                     |

|  |                                                                                                                                                         |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | the project activity. They also expecting positive development in their villages in terms of infrastructure, employment and environment in near future. |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------|

### 2.1.3 Free, Prior, and Informed Consent

|                        |                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Consent</b>         | The project activity is greenfield wind power project, in which all the approvals and prior consent to operate have been taken from the local authorities and there was no objection from their side. |
| <b>Outcome of FPIC</b> | The project activity is greenfield wind power project which has not encroached any kind of land from the local and government authorities.                                                            |

### 2.1.4 Grievance Redress Procedure

| Grievances received                                         | Resolution and outcome                                                                    |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| No grievance received during the current monitoring period. | The project has not received any negative or discouraging comments from the stakeholders. |

The grievance mechanism process could be illustrated as below:

PP has placed a grievance register onsite where-in, the stakeholders can put down their request/complaint/requirements. Same is continuously monitored and appropriate action are also being taken by management. Furthermore, PP has also placed a notice board on site to communicate any necessary information/updates to local stakeholders. PP has found this two-way communication with local stakeholders is very effective towards sustainability of the project in long run.

As part of organizational policy, there are continuous interactions undertaken by Project Participant's officials with local community stakeholders. During these discussions, local villagers shares their observations and comments. All the observations, comments and queries raised during discussion have been adequately responded to. Some of the suggestions have also been incorporated in the overall vision and stakeholder engagement action plan of the organization.

### 2.1.5 Public Comments

| Summary of comments received | Actions taken |
|------------------------------|---------------|
|------------------------------|---------------|

No comments from stakeholder during current monitoring period.

No action is required

## 2.2 Risks to Stakeholders and the Environment

### 2.2.1 Management Experience

Not applicable

As no entity has been newly involved in project design or implementation during the current monitoring period.

### 2.2.2 Risk assessment

|                                                                                                   | Risk identified    | Mitigation or preventative measure taken                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risks to stakeholder participation                                                                | No risk identified | The project activity is a greenfield wind power project. There is no trade-off or any negative impact to their livelihood, land, food, etc. Therefore, no risk identified to stakeholder participation |
| Working conditions                                                                                | No risk identified | Project activities create indirect livelihood opportunities for local people. The working conditions are inline with government norms.                                                                 |
| Safety of women and girls                                                                         | No risk identified | The HR policies are stated as per the safety of both women and girls                                                                                                                                   |
| Safety of minority and marginalized groups, including children                                    | No risk identified | PP has followed all the regulations and safety protocols provided to the minority and marginalized groups and also not employed any children below 18 ages.                                            |
| Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials) | No risk identified | The project activity is a greenfield wind power project, which do not emit any kind of air, water, soil, and hazardous material.                                                                       |

## 2.3 Respect for Human Rights and Equity

### 2.3.1 Labor and Work

| Risks identified <sup>3</sup>   |                        | Mitigation or preventative measure(s) taken                                                                                                                                                                                                                                                                                          |
|---------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discrimination                  | No risk is identified. | PP is committed to providing an environment free from sexual harassment. PP follows company policy on 'Prevention of Sexual Harassment at the Workplace Policy' which protects from sexual harassment by vendors, contractors, and third parties.                                                                                    |
| Sexual harassment               | No risk is identified. | The PP is Independent Power Producer (IPP) and has been in the renewable energy business for more than 20 years. PP has been actively involved in design or implementation of project activity. PP has policies in place to inform management and employees about the avoidance of corruption, code of conduct, and business ethics. |
| Gender equity in labor and work | No risk is identified. | The PP is Independent Power Producer (IPP) and has been in the renewable energy business for more than 20 years. The PP has policies in place to ensure fair opportunity and equal pay for work done to both men and women.                                                                                                          |
| Forced labor                    | No risk is identified. | The PP is Independent Power Producer (IPP) and has been in the renewable energy business for more than 20 years. PP has policies which prohibits child labor or forced, involuntary or trafficked labor in any form. All employees shall treat one another with respect, dignity and common courtesy.                                |
| Child labor                     | No risk is identified. | The PP is Independent Power Producer (IPP) and has been in the renewable energy business for more than 20 years. PP has                                                                                                                                                                                                              |

<sup>3</sup> The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

|                   |                        |                                                                                                                                                                                                                                                                                                       |
|-------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |                        | policies which prohibits child labor or forced, involuntary or trafficked labor in any form. All employees shall treat one another with respect, dignity and common courtesy.                                                                                                                         |
| Human trafficking | No risk is identified. | The PP is Independent Power Producer (IPP) and has been in the renewable energy business for more than 20 years. PP has policies which prohibits child labor or forced, involuntary or trafficked labor in any form. All employees shall treat one another with respect, dignity and common courtesy. |

### 2.3.2 Human Rights

| Risks identified   | Mitigation or preventative measure(s) taken                         |
|--------------------|---------------------------------------------------------------------|
| No risk identified | The project does not violate the human rights of indigenous people. |

### 2.3.3 Indigenous Peoples and Cultural Heritage

| Risks identified   | Mitigation(s) or preventative measure taken                                    |
|--------------------|--------------------------------------------------------------------------------|
| No risk identified | The project does not affect the indigenous people and their cultural heritage. |

### 2.3.4 Property Rights

| Risks identified   | Mitigation or preventative measure(s) taken                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No risk identified | This project does not infringe with property rights and resources. Hence, there is no need to implement any measures to protect and preserve the property rights of stakeholders, IPs, LCs, and customary rights holders. |

### 2.3.5 Benefit Sharing

|                                     |                                                                                                  |
|-------------------------------------|--------------------------------------------------------------------------------------------------|
| Summary of the benefit sharing plan | Project activity is a greenfield wind power project where the benefit sharing is not applicable. |
|-------------------------------------|--------------------------------------------------------------------------------------------------|

|                                              |                                                                                       |
|----------------------------------------------|---------------------------------------------------------------------------------------|
| Benefit sharing during the monitoring period | Not applicable because the project activity does not have any impacts property right. |
|----------------------------------------------|---------------------------------------------------------------------------------------|

## 2.4 Ecosystem Health

|                                        | Risk identified    | Mitigation or preventative measure taken during the monitoring period                                             |
|----------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------|
| Impacts on biodiversity and ecosystems | No risk identified | Since the project activity is wind power plant, there is no impact on biodiversity and ecosystem.                 |
| Soil degradation and soil erosion      | No risk identified | Since the project activity is wind power plant, there is no soil erosion and degradation are likely to be caused. |
| Water consumption and stress           | No risk identified | Since the project activity is wind power plant, there is no water consumption and stress is likely to be caused.  |

### 2.4.1 Rare, Threatened, and Endangered species

|                                       |                                                                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Species or habitat                    | After installation or during the install of WTGs there is no impact to the rare, threatened or endangered species of the surroundings. |
| Areas needed for habitat connectivity | Not Applicable                                                                                                                         |

|                                                       | Risks identified   | Mitigation or preventative measure(s) taken |
|-------------------------------------------------------|--------------------|---------------------------------------------|
| Habitats for rare, threatened, and endangered species | No risk identified | Not Applicable                              |
| Areas for habitat connectivity                        | No risk identified | Not Applicable                              |

## 2.4.2 Introduction of species

| Species introduced | Classification | Justification for use                                                                                                                 | Adverse effects and mitigation |
|--------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Not Applicable     | Not Applicable | Since the project activity is greenfield wind power project, it is not applicable as project activity does not introduce any species. | Not Applicable                 |

| Existing invasive species | Mitigation measures to prevent spread or continued existence of invasive species |
|---------------------------|----------------------------------------------------------------------------------|
| Not Applicable            | Not Applicable                                                                   |

|                  | Risks identified | Mitigation or preventative measure(s) taken |
|------------------|------------------|---------------------------------------------|
| Invasive species | Not Applicable   | Not Applicable                              |

## 2.4.3 Ecosystem conversion

This project activity does not involve ARR, ALM, WRC or ACoGS activities. Hence, not applicable.

|                      | Risks identified | Mitigation or preventative measure(s) taken |
|----------------------|------------------|---------------------------------------------|
| Ecosystem conversion | NA               | NA                                          |

# 3 IMPLEMENTATION STATUS

## 3.1 Implementation Status of the Project Activity

The first machine under the project activity was commissioned on 26-03-2014 and last machine was commissioned on 31-03-2014. The combined capacity of the project is 60 MW which is using Gamesa make 2.0 MW G97 WTGs at Jath site. The commissioning date for all the machines installed in the project activity is given in the table below:

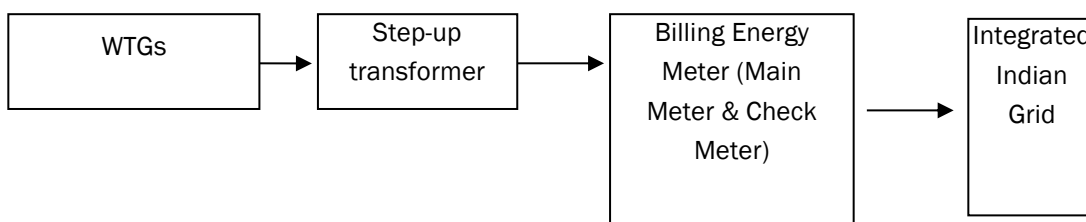
| S. No. | Machine ID | Commissioning Dates | S. No. | Machine ID | Commissioning Dates |
|--------|------------|---------------------|--------|------------|---------------------|
| 1.     | J97/2-110  | 26-Mar-14           | 16.    | J97/1-227  | 30-Mar-14           |
| 2.     | J97/2-87   | 26-Mar-14           | 17.    | J97/1-190  | 30-Mar-14           |
| 3.     | J97/2-114  | 26-Mar-14           | 18.    | J97/1-164  | 30-Mar-14           |

| S. No. | Machine ID | Commissioning Dates | S. No. | Machine ID | Commissioning Dates |
|--------|------------|---------------------|--------|------------|---------------------|
| 4.     | J97/1-185  | 30-Mar-14           | 19.    | J97/2-91   | 30-Mar-14           |
| 5.     | J97/1-226  | 30-Mar-14           | 20.    | J97/2-145  | 30-Mar-14           |
| 6.     | J97/2-16   | 30-Mar-14           | 21.    | J97/2-119  | 30-Mar-14           |
| 7.     | J97/1-166  | 30-Mar-14           | 22.    | J97/2-128  | 30-Mar-14           |
| 8.     | J97/1-163  | 30-Mar-14           | 23.    | J97/2-132  | 30-Mar-14           |
| 9.     | J97/1-231  | 30-Mar-14           | 24.    | J97/2-129  | 30-Mar-14           |
| 10.    | J97/1-228  | 30-Mar-14           | 25.    | J97/2-41   | 30-Mar-14           |
| 11.    | J97/1-147  | 30-Mar-14           | 26.    | J97/2-42   | 30-Mar-14           |
| 12.    | J97/1-114  | 30-Mar-14           | 27.    | J97/1-165  | 30-Mar-14           |
| 13.    | J97/1-173  | 30-Mar-14           | 28.    | J97/1-248  | 30-Mar-14           |
| 14.    | J97/1-197  | 30-Mar-14           | 29.    | J97/1-239  | 30-Mar-14           |
| 15.    | J97/1-102  | 30-Mar-14           | 30.    | J97/2-161  | 31-Mar-14           |

#### Events that may impact the GHG emission reductions or removals and monitoring:

No such events took place during the monitoring period that may impact the GHG emission reductions for the project activity. The project activity has been exporting electricity continuously since commissioning. There were neither major breakdowns nor other events for the project activity during the monitoring period that may impact the GHG emission reductions for the project activity.

Monitoring equipment line diagram at project Site is detailed as below: -



## 3.2 Deviations

### 3.2.1 Methodology Deviations

There are no deviations related to applied methodology.

### 3.2.2 Project Description Deviations

PP name has been changed from CLP Wind Farms (India) Private Limited to Apraava Renewable Energy Private Limited (AREPL) as mentioned in section 1.1.

### 3.3 Grouped Projects

The project is not a grouped project; hence this is not applicable.

### 3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

## 4 DATA AND PARAMETERS

### 4.1 Data and Parameters Available at Validation

|                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data / Parameter                                                                             | $EF_{grid,OM,y}$                                                                                                                                                                                                                                                                                                                                                                                  |
| Data unit                                                                                    | tCO <sub>2</sub> e/MWh                                                                                                                                                                                                                                                                                                                                                                            |
| Description                                                                                  | Operating Margin (OM) Emission Factor in year                                                                                                                                                                                                                                                                                                                                                     |
| Source of data                                                                               | Calculated from CEA database, Version 10, December 2014                                                                                                                                                                                                                                                                                                                                           |
| Value applied                                                                                | 0.9862                                                                                                                                                                                                                                                                                                                                                                                            |
| Justification of choice of data or description of measurement methods and procedures applied | Calculated as per “Tool to calculate the emission factor for an electricity system, version 04.0.0” as 3-year generation weighted average using data for the years 2011-2012, 2012-2013 & 2013-2014. The data are obtained from “CO <sub>2</sub> Baseline Database for Indian Power Sector” version 10.0, published by the Central Electricity Authority, Ministry of Power, Government of India. |
| Purpose of Data                                                                              | Baseline Emission calculation                                                                                                                                                                                                                                                                                                                                                                     |
| Comments                                                                                     | Operating margin emission factor is fixed ex-ante throughout the crediting period.                                                                                                                                                                                                                                                                                                                |

|                                                                                              |                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data / Parameter                                                                             | $EF_{grid,BM,y}$                                                                                                                                                                                                                                                                                                        |
| Data unit                                                                                    | tCO <sub>2</sub> e/MWh                                                                                                                                                                                                                                                                                                  |
| Description                                                                                  | Build Margin (BM) Emission Factor in year y                                                                                                                                                                                                                                                                             |
| Source of data                                                                               | Calculated from CEA database, Version 10, December 2014                                                                                                                                                                                                                                                                 |
| Value applied                                                                                | 0.9495                                                                                                                                                                                                                                                                                                                  |
| Justification of choice of data or description of measurement methods and procedures applied | Calculated as per “Tool to calculate the emission factor for an electricity system, version 04.0.0” for the year 2013-2014. The data is obtained from “CO <sub>2</sub> Baseline Database for Indian Power Sector” version 10.0, published by the Central Electricity Authority, Ministry of Power, Government of India. |

|                 |                                                                               |
|-----------------|-------------------------------------------------------------------------------|
| Purpose of Data | Baseline Emission calculation                                                 |
| Comments        | Build margin emission factor is fixed ex-ante throughout the crediting period |

| Data / Parameter                                                                             | EF <sub>grid,CM,y</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                               |  |                                                            |        |                                 |        |                                            |        |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--|------------------------------------------------------------|--------|---------------------------------|--------|--------------------------------------------|--------|
| Data unit                                                                                    | tCO <sub>2</sub> e/MWh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Description                                                                                  | Combined Margin (CM) Emission Factor in year y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Source of data                                                                               | Calculated from CEA database, Version 10, December 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Value applied                                                                                | 0.9770                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Justification of choice of data or description of measurement methods and procedures applied | <p>Calculation based on 75% of OM and 25% of BM values approach as directed by ‘Tool to calculate the emission factor for an electricity system’, version 04.0.0” for the year 2013-2014.</p> <table border="1"> <thead> <tr> <th colspan="2">Combined Margin Estimation for Indian Integrated Grid (tCO<sub>2</sub>/MWh)</th></tr> </thead> <tbody> <tr> <td>Generation Weighted Average OM (EF<sub>grid, OM,y</sub>)</td><td>0.9862</td></tr> <tr> <td>BM (EF<sub>grid, BM, y</sub>)</td><td>0.9495</td></tr> <tr> <td>Combined Margin (EF<sub>grid,CM,y</sub>)</td><td>0.9770</td></tr> </tbody> </table> | Combined Margin Estimation for Indian Integrated Grid (tCO <sub>2</sub> /MWh) |  | Generation Weighted Average OM (EF <sub>grid, OM,y</sub> ) | 0.9862 | BM (EF <sub>grid, BM, y</sub> ) | 0.9495 | Combined Margin (EF <sub>grid,CM,y</sub> ) | 0.9770 |
| Combined Margin Estimation for Indian Integrated Grid (tCO <sub>2</sub> /MWh)                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Generation Weighted Average OM (EF <sub>grid, OM,y</sub> )                                   | 0.9862                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| BM (EF <sub>grid, BM, y</sub> )                                                              | 0.9495                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Combined Margin (EF <sub>grid,CM,y</sub> )                                                   | 0.9770                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Purpose of Data                                                                              | Baseline Emission calculation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                               |  |                                                            |        |                                 |        |                                            |        |
| Comments                                                                                     | Combined margin emission factor is fixed ex-ante throughout the crediting period                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                               |  |                                                            |        |                                 |        |                                            |        |

## 4.2 Data and Parameters Monitored

|                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data / Parameter                                                | EG <sub>PJ,y</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Data unit                                                       | MWh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Description                                                     | Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Source of data                                                  | Monthly electricity share certificates/note or Credit Note or Joint Meter Reading Report                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Description of measurement methods and procedures to be applied | The value of net electricity generation supplied to the grid is as per the Monthly electricity share certificates/note or Credit Note or Joint Meter Reading Report (issued by MSEDCL), which can be cross checked from the invoice raised to DISCOM. This document forms the basis for calculation of the emission reductions. Net electricity supplied to the grid has been calculated as the difference between the measured values of “export” and “import” of electricity, recorded through the dedicated SEB energy meter |

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | <p>(electronic tri-vector bidirectional) installed at the delivery point of the electricity (i.e. at the connected substation). 2 meters – main and check are installed at each feeder and total 8 feeders have been installed in this project. In case of failure of main meter, values from check meter are utilized.</p> <p>Net electricity generated and supplied by the project to the grid = Electricity Export to the grid - Electricity Import from the grid<br/>Monthly meter readings are taken from the main and check meter installed at the substation and certified by the representatives of SEB Officials and the representatives of the project proponent.</p> <p>For, apportioning procedure refer section 3.3 of the MR.</p> |
| Frequency of monitoring/recording | Continuous monitoring, hourly measurement and monthly recording                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Value monitored                   | 99,693.84 MWh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Monitoring equipment              | <p>The net electricity supplied by the project activity to the grid has been calculated based on electricity export and import by the WTGs which are measured by export-import energy meters. Details of the energy meters are provided in section 4.3 below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| QA/QC procedures to be applied    | <ul style="list-style-type: none"> <li>• The energy meter reading is taken on monthly basis</li> <li>• Energy meters are calibrated once in a three year and faulty meters will be duly replaced immediately.</li> <li>• All the energy meters are under the control of state utility and calibration/testing of energy meters is also under the jurisdiction of state utility.</li> </ul> <p>The Net electricity exported to the grid has been cross checked against the invoice raised by the CLPWFPL towards the DISCOM</p>                                                                                                                                                                                                                  |
| Purpose of the data               | Baseline Emissions calculation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Calculation method                | <p>O&amp;M contractor apportioned the electricity export and import data based on individual WTGs controller reading, summation of all controller reading of WTGs connected under the common feeder and joint meter reading (based on billing meter) and provide month wise “Energy Breakup Report” which contains electricity export, import. Detailed calculation procedure is mentioned in section 3.3.</p>                                                                                                                                                                                                                                                                                                                                  |

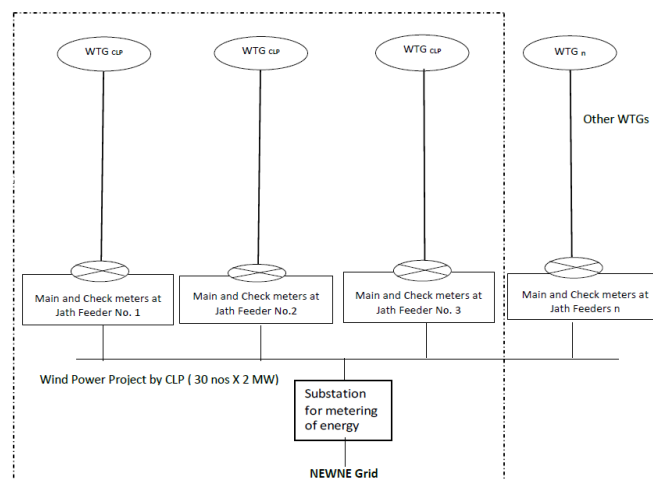
## Comments

This data has been used to calculate the baseline emissions. Additionally, the data will be archived for crediting period+2 years.

## 4.3 Monitoring Plan

The monitoring methodology specified in the methodology requires that the project-monitoring plan to consist of monitoring of quantity of net electricity supplied to the grid in the year y. In order to monitor the mitigation of GHG due to the project activity, the total energy exported needs to be measured. The net energy supplied to grid by the project activity multiplied by emission factor for regional grid, formed the baseline for the project activity.

Since the baseline emission factor is based on an ex-ante determination, monitoring of this parameter is not required. The sole parameter for monitoring is the net electricity exported to the grid.



### Aim of monitoring:

The monitoring procedure sets guidelines for the project investor to monitor the parameters regularly and to ensure quality and accuracy in monitoring. It elaborates on the functions of the monitoring team and procedures to be followed in monitoring of the VCS parameters.

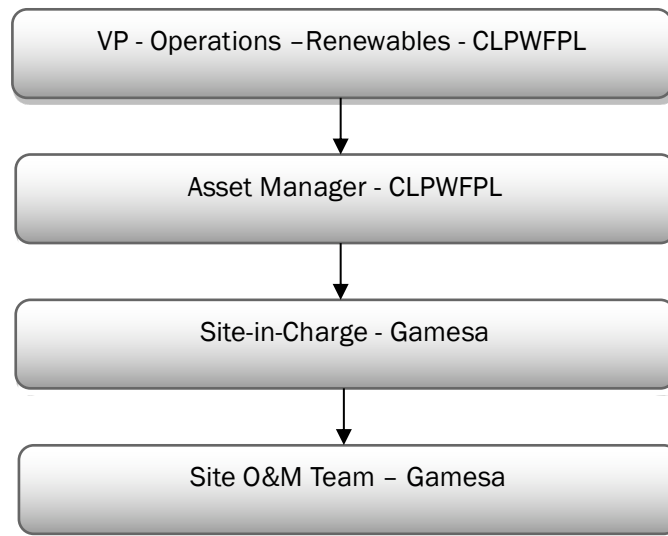
The monitoring shall include all the equipment's that contribute towards reduction in GHG emissions. Since the project activity focuses mainly on the generation of renewable power, it is important to monitor all the equipment's involved in the metering of all the necessary instruments.

The project investor has a well-defined management structure for monitoring the project activity.

### Monitoring roles and responsibilities

The operational and management structure implemented for data monitoring is as follows:

The Project activity is operated by Gamesa (O&M contractor for the project activity) and managed by the PP. The operational and maintenance contract for the project activity is with Gamesa, which is an ISO 9001 certified company. Gamesa follows the documentation practices to ensure the reliability and availability of the data for all the activities as required from the identification of the site, wind resource assessment, logistics, finance, construction, commissioning and operation of the wind power project. The data for the project is compiled by the O&M Contractor and subsequently stored by the PP. The roles and responsibilities for the project are described as below;



### Personnel Training:

The project personnel, including those involved in data recording, maintenance and direct data assessments have been with training on the application and usage of the manual.

### Training and maintenance requirements:

O&M operator has provided training to the on-site staffs on operation and maintenance of the metering system and adherence to the Monitoring Plan of the project activity. Training for operation of both Wind projects shall be provided by the respective O&M Operators.

For WTGs, Training on the machine is an essential pre-requisite, to ensure necessary safety of man and machine. Further, in order to maximize the output from the WTGs, it is extremely essential, that the engineers and technicians understand the machines and keep them in good health. In order to ensure that technology providers' service staff is deft at handling technical snags on top of the turbine, the necessity of ensuring that they are capable of climbing the tower with absolute ease and comfort has been established.

**Data Recording:**

The state utility and representative of concerned Power Producer / developer shall jointly read the metering system every month at the delivery point.

Meter readings taken jointly signed by the representatives of state utility and of concerned power producer/developer. If Power Producer/ Developer's representative is not present for joint meter reading then the meter reading taken by state utility shall be considered as final; provided a signed copy of the meter reading is sent to the Power Purchase / Developer within twenty four (24) hours of such reading of the main metering system or back up metering system as the case may be.

**Reading and Correction of Meters:**

For energy accounting, O&M operator has provided ABT compliant meters at the interface points. Interface metering is in line to the Central Electricity Authority (Installation and Operation Meters) Regulation, 2006. If the main meter is not in service as a result of maintenance, repairs or testing, then the check meter will be used during the period the main meter is not in service.

**Calibration of Meters:**

Calibration of all the meters have been undertaken at least once in 3 years and faulty meters will be duly replaced immediately. Calibration has been done by an authorized agency or reputed laboratory.

**Apportioning Procedure for (Wind) Power Project connected to Indian Integrated grid (same is now part of integrated Indian grid)**

The net electricity supplied to the grid has been reported as the difference between the net export and import from the WTG. The electricity export and import data have been monitored via main and check meters connected to feeders at the respective sub-station.

In case of Indian Integrated grid, multiple WTGs have been connected to the feeder, one of which is be part of the project activity and rest of which are not be part of the project activity (WTGs owned by other entities). The import and export of electricity is continuously monitored by the export/ import meter and the data is recorded on a monthly basis jointly by the proponent and the electricity board. The meter is located at the delivery point of wind power in the grid. This accounts for the import of electricity that is used by the Project proponent. Hence the net electricity generated is calculated from the joint meter reading and recorded /archived in paper/electronic.

SEB/O&M Contractor follows an apportioning procedure to account for electricity generation from individual WTGs based on data from individual WTG controllers.

Following the joint meter readings, apportioning of net electricity supplied to grid by each WTG is done by the SEB/O&M Contractor based on the individual meter readings recorded from the

controller panel meter of each WTG and based on the meter reading recorded from the meters situated at the connected substations.

In case of Maharashtra only, based on the monthly export and import data as per main/check meters and the WTG controller readings, SEB provides a break-up of the electricity exported and imported for each WTG.

A monthly joint meter reading of the energy meters is taken by MSEDCL officials and O&M contractors (representatives of the project investor). Apportioning of net electricity generation from each WTG connected to Indian Integrated grid is then determined as follows:

| 1. | Apportioning Ratio                                           | = | Generation at WTG Controller                                                         |
|----|--------------------------------------------------------------|---|--------------------------------------------------------------------------------------|
|    |                                                              |   | Total Generation of All WTG Controller for the feeder                                |
| 2. | Electricity Import from WTG by the grid ( $EG_{import}$ )    | = | Import from Main/Check Meter * Apportioning Ratio                                    |
| 3. | Electricity Export to the WTGs by the grid ( $EG_{export}$ ) | = | Export from Main/Check Meter * Apportioning Ratio                                    |
| 4. | Net electricity generated by WTG                             | = | Electricity Import from WTG by the grid - Electricity Export to the WTGs by the grid |

Above steps for calculation of  $EG_{import}$  and  $EG_{export}$  are carried out by MSEDCL Officials & energy break-up sheet is issued by the MSEDCL Officials. Based on the break-up sheets Project investor raises invoice to DISCOM which forms the cross-check for the net electricity generated. The Project investor has no role in the entire procedure of apportioning

#### Emergency Preparedness and Uncertainty Procedure:

In case Main meter or check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible. In the event that the Main meter is not in service as a result of maintenance, repairs or testing, the check meter will be used. In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid.

#### Data Recording and Archiving:

O&M operator kept complete and accurate records of operating log at the Power Plant. The data has been archived electronically as well as in log books at the power plant and kept for two years after the end of the crediting period or the last issuance of VERs for this project activity, whichever occurs later.

In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from:

- 1) Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate / JMR Report / Credit Notes certified by the respective state DISCOM, based on the number of days in the monitoring period and the number of days for which Share Certificate / JMR Report / Credit Notes was prepared.

The calculated value after apportioning would be used for calculation of emission reductions during that period.

#### Meter Calibration Details:

| Sl. No. | Feeder No | Meter Identification No   | Meter Make | Accuracy Class | Calibration before Monitoring Period | Calibration Validity Till | Calibration during Monitoring Period | Calibration Validity Till |
|---------|-----------|---------------------------|------------|----------------|--------------------------------------|---------------------------|--------------------------------------|---------------------------|
| 1       | Feeder-1  | 02814124<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 15687856<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 2       | Feeder-2  | 15687858<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 15687860<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 3       | Feeder-3  | 15687862<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 12853657<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 4       | Feeder-4  | 13813553<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 16351040<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 5       | Feeder-6  | 16636465<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 16636468<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 6       | Feeder-7  | 15456640<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |

| Sl. No. | Feeder No | Meter Identification No   | Meter Make | Accuracy Class | Calibration before Monitoring Period | Calibration Validity Till | Calibration during Monitoring Period | Calibration Validity Till |
|---------|-----------|---------------------------|------------|----------------|--------------------------------------|---------------------------|--------------------------------------|---------------------------|
|         |           | 16351020<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 7       | Feeder-9  | 16351021<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 16351022<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
| 8       | Feeder-8  | 16636473<br>(Main Meter)  | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |
|         |           | 02814125<br>(Check Meter) | Elester    | 0.2s           | 20/08/2020                           | 19/08/2023                | 27/10/2023                           | 26/10/2026                |

Calibration frequency of the meter is once in three years. Due to delay in calibration of energy meters, PP has applied max error factor in net electricity export for the month of August, September, October 2024 conservatively. There was not any significant period of shut-down or break-down period during this monitoring period.

## 5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

### 5.1 Baseline Emissions

As per the equation 6 of the methodology ACM 0002 (Version 16.0),

$$BE_y = EG_{PJ, y} * EF_{grid, CM, y}$$

Where:

$BE_y$  : Baseline emissions in year y (tCO<sub>2</sub>e/yr)

$EG_{PJ, y}$  : Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y (MWh/yr)

$EF_{grid, CM, y}$  : Combined Margin (CM) Emission Factor of Indian Integrated Grid (tCO<sub>2</sub>e/MWh)

Baseline Emission ( $BE_y$ ):

Thus,  $BE_y = EG_{PJ, y} * EF_{grid, CM, y}$

Thus,  $BE_y = 99,693.84 \text{ MWh} * 0.9770 \text{ tCO}_2\text{e/MWh}$   
 $= 97,400 \text{ tCO}_2$  (after rounding down)

## 5.2 Project Emissions

Since the project activity is a renewable energy project which generates electricity using wind power and hence does not result in project emissions as per the applicable methodology ACM0002, version 16.

## 5.3 Leakage Emissions

As per ACM0002 Version 16.0.0, no leakage has been considered for the calculation of emission factor

## 5.4 GHG Emission Reductions and Carbon Dioxide Removals

According to the approved methodology ACM0002 (Version 16) Emission Reductions are calculated as

$$ER_y = BE_y - PE_y$$

Where:

$ER_y$  Emission reductions in year y ( $\text{tCO}_2\text{e/yr}$ )

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

$PE_y$  Project Emissions in year y ( $\text{tCO}_2\text{e/yr}$ )

Thus,

$$ER_y = 97,400 - 0 \text{ tCO}_2\text{e}$$

$$= 97,400 \text{ tCO}_2\text{e}$$

| Vintage period                   | Baseline emissions ( $\text{tCO}_2\text{e}$ ) | Project emissions ( $\text{tCO}_2\text{e}$ ) | Leakage emissions ( $\text{tCO}_2\text{e}$ ) | Reduction VCUs ( $\text{tCO}_2\text{e}$ ) | Removal VCUs ( $\text{tCO}_2\text{e}$ ) | Total VCUs ( $\text{tCO}_2\text{e}$ ) |
|----------------------------------|-----------------------------------------------|----------------------------------------------|----------------------------------------------|-------------------------------------------|-----------------------------------------|---------------------------------------|
| 2023 (01-01 -2023 to 31-12-2023) | 97,400                                        |                                              |                                              |                                           |                                         | 97,400                                |

|       |        |   |   |        |   |        |
|-------|--------|---|---|--------|---|--------|
|       |        | 0 | 0 | 97,400 | 0 |        |
| Total | 97,400 | 0 | 0 | 97,400 | 0 | 97,400 |

| Vintage period                     | Ex-ante estimated reductions/removals | Achieved reductions/removals | Percent difference | Explanation for the difference                                                                                                                                                                                                              |
|------------------------------------|---------------------------------------|------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023<br>(01-01-2023 to 31-12-2023) | 1,18,364                              | 97,400                       | -17.71 %           | The actual emission reductions for the current monitoring period is 17.71 % lower than estimated emission reductions. Availability of wind during low wind season is a natural phenomenon which is beyond the control of project proponent. |

# APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

The project activity is greenfield wind power project, there are no commercially sensitive information so this section is not applicable