GRID CONNECTED SOLAR ENERGY PROJECT

Document Prepared by CLP India Private Limited

Project Title	Grid Connected Solar Energy Project
Version	1.1
Report ID	VER/VGT/22-23
Date of Issue	04/10/2023
Project ID	1890
Monitoring Period	21/09/2022 to 31/08/2023 (both days inclusive)
Prepared By	CLP India Private Limited
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CONTENTS

1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The project activity involved installation of 170 MW_{AC} solar projects in the states of Telangana and Maharashtra of India. The project activity constitutes of three solar projects viz. 100 MW_{AC} Veltoor by CLP India Private Limited, 50 MW_{AC} Gale by Gale Solarfarms Private Limited and 20 MW_{AC} Tornado by Tornado Solarfarms Private Limited. The main purpose of this project activity is to generate electricity through renewable energy source and to sale the same to Indian grid. The project activity utilizes solar energy to generate clean power with a view to bring in greenhouse gas emission reductions. This project activity constitutes of three independent solar projects with different capacities. Details of the sub-project activity are mentioned below:

Name of Legal Entity	Commercial Date of Operation	Capacity	Location (Village/State)
CLP India Private Limited[1]	07-Aug-2017	100 MW_{AC}	Dwarakanagar, Ammapur and Muthyalampalle villages in Mahbubnagar dist. in the state of Telangana, India
Gale Solarfarms Private Limited	08-Feb-2018	50 MW_{AC}	Saltek and Bhamer villages in Dhule district of Maharashtra, India
Tornado Solarfarms Private Limited	09-Nov-2017	20 MW_{AC}	

The project activity utilises solar energy to generate clean power with a view to bring in greenhouse gas emission reductions. The power generated from this project activity is being supplied to the state electricity grid which is a part of Indian grid. The project is fully commissioned and is supplying electricity to Indian Grid.

The Project activity is a new facility (Greenfield) and the purpose of the project activity is to generate energy electricity by the utilization of solar energy and further selling the generated energy to the 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 would be 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

[1]The legal entity of SE Solar Limited has now been merged with CLP India Private Limited. Thus, deviation has been considered in last verification

generation and reduction of GHG emissions. The first project under this project activity was commissioned on 07-Aug-2017 and last project was commissioned on 08-Feb-2018. The expected operational lifetime of the project is for 25 years.

During this monitoring period the project activity has exported 321,733.63 MWh of net energy to the Indian grid system. The total emission reductions achieved during the monitoring period from 21/09/2022 to 31/08/2023 (both days inclusive) is 301,399 tCO_2.

The audit history of the project is provided below:

Audit Type	Period	Program	VVB Name	Number of years
Validation and Verification	07/08/2017 to 31/03/2019	VCS	LGAI Technological Center S.A. (Applus+ Certification)	1 year, 7 months, 25 days
Verification	01/04/2019 to 20/07/2020	VCS	Earthood Services Private Limited	1 year, 3 months, 20 days
Verification	21/07/2020 to 20/05/2021	VCS	Earthood Services Private Limited	10 months
Verification	21/05/2021 to 20/09/2022	VCS	LGAI Technological Center S.A. (Applus+ Certification)	1 year, 4 months
Verification	21/09/2022 to 31/08/2023	VCS	LGAI Technological Center S.A. (Applus+ Certification)	11 months
Total	07/08/2017 to 31/08/2023	-	-	~ 6 years

1.2 Sectoral Scope and Project Type

Sectoral scope : 01 Energy Industries (renewable -/ non renewable sources)

Project Type : I, Renewable energy project

Methodology : ACM0002 - : Grid-connected electricity generation from renewable sources, ACM0002 of version 19.0

The project is not a grouped project.

1.3 Project Proponent

Organization name	CLP India Private Limited

Contact person	Navneet Kumar
Title	Head–Carbon & Sustainability
Address	7th Floor, FULCRUM, Sahar Road, Andheri (East), Mumbai – 400 099. India
Telephone	+9122 67588888
Email	navneet.kumar@apraava.com

1.4 Other Entities Involved in the Project

Organization name	Gale Solarfarms Private Limited
Role in the Project	Project Developer
Contact person	Navneet Kumar
Title	Manager–Carbon & Sustainability
Address	7th Floor, FULCRUM, Sahar Road, Andheri (East), Mumbai – 400 099. India
Telephone	+9122 67588888
Email	carbon@clpindia.in

Organization name	Tornado Solarfarms Private Limited
Role in the Project	Project Developer
Contact person	Navneet Kumar
Title	Manager–Carbon & Sustainability
Address	7th Floor, FULCRUM, Sahar Road, Andheri (East), Mumbai – 400 099. India
Telephone	+9122 67588888
Email	carbon@clpindia.in

1.5 Project Start Date

Commercial date of Operations of Veltoor, Gale and Tornado solar projects are on 07/08/2017, 08/02/2018 and 09/11/2017 respectively. Thus, projects are started emission reduction from its commercial date of operations respectively. Therefore, the start date for this project is 07/08/2017 which is the commercial date of operation of Veltoor solar project.

1.6 Project Crediting Period

The length of the Crediting period of the project activity is 10 years (Renewable twice) starting from 07/08/2017 to 06/08/2027.

1.7 Project Location

Project is spread across two sites – Veltoor, Telengana and Dhule, Maharashtra. Location details of these sites are as follows

Site 1: Veltoor

The 100 MW_{AC} Veltoor solar plant is located in Dwarkanagar, Ammapur and Muthyapalle village in Kothakota, Chinnachintakunta and Devarkadramandal of Mehboobnagar district of Telangana. The site is accessed through National Highway 7 (NH-7) (9 km east of project site) and further reached by a 300 m long village road connecting Kottakota village to project site. The site lies around the coordinates 16°26' 38.98" N and 77° 52' 3.83" E and at an altitude of approximately 352 m, above mean sea level. The nearest commercial city is Hyderabad, which is approximately 130 km from the Project site location.

Site 2: Dhule, Maharashtra

The 50 MW_{AC} Gale and 20 MW_{AC} Tornado solar plants are located in Saltek and Bhamer villages in Dhule district of Maharashtra. The site is accessed through National Highway 7 (NH-7). The site lies around the coordinates 21.1° N and 74.3° E. The nearest commercial city is Nasik, which is approximately 170 km from the Project site location.

1.8 Title and Reference of Methodology

Following approved baseline & monitoring methodology is applied in this project activity:

Title : Grid-connected electricity generation from renewable sources, ACM0002

Version: 19

Scope : 01, Energy industries (renewable - / non-renewable sources)

Web link : https://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD

- The tools referenced in this methodology include:
  Tool to calculate the emission factor for an electricity system Version 07.0.0, EB 100, Annex 04 (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf)

- Methodological tool: Tool for the demonstration and assessment of additionality version 07.0 (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf)

- Apart from this following Tools/Guidelines are referred:

  i. Guidance on the Assessment of Investment Analysis (EB 62 Annex 05)(https://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf)

ii. Methodological tool for Investment analysis, Version-06, Annex-12 of EB 85 Report (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v1.pdf)

iii. Methodological tool for Investment analysis, Version-09.0, Annex-11 of EB 101 Report(https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v9.0.pdf)

1.9 Participation under other GHG Programs

The project activity has not been registered or currently seeking registration under any other GHG programs.

1.10 Other Forms of Credit and Supply Chain (Scope 3) Emissions

- Emission Trading Programs and Other Binding Limits: The project has not participated in any Emissions Trading Programs. The emission reductions generated for this duration of periodic verification would not be claimed under any other GHG programs

- Other Forms of Environmental Credit: CLP here by confirms that the project has not sought or received any other GHG related environmental credit and submitted a declaration to DoE that CLP wouldn't claim any form of environmental credit except VCU for the said duration. Additionally, project is only registered under VCS program and the project is not eligible to create another form of GHG-related environment credit.

- Participation under Other GHG Programs: The project has been exclusively taken up as VCS project and has not been applied for any other form of environmental credit

1.11 Sustainable Development Contributions

The National CDM Authority (NCDMA) which is the Designated National Authority (DNA) for the Government of India (GoI) in the Ministry of Environment and Forests (MoEF) has stipulated four indicators for sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India[2]. The contribution of this project activity towards in terms of these four indicators is provided below:

- **Social wellbeing & Economic wellbeing:**

  The project activity will lead to improved infrastructure in the area due to construction of roads and other project related activities. The project will provide employment opportunities to skilled and unskilled workers from the region during its construction and operation. The proposed project activity also contributes to the improvement of the economic conditions of the local people as there will be an improvement in the availability of electricity which leads to further economic development of the area. Further, series of CSR activities has been initiated for the project location which would positively stimulate the social & economic wellbeing of the local area.

[2]http://cdmindia.nic.in/host_approval_criteria.htm

- **Technological wellbeing:**

  The technology employed is proven and environmentally safe and sound. The technology is available and supplied from the host country and hence there is no transfer of technology from an Annex-I country.

- **Environmental well-being**:

  The project activity reduces carbon dioxide emissions through the avoided usage of fossil fuel based electricity generation. Being a renewable resource, using solar energy to generate electricity contributes to resource conservation. Thus, the project will cause no negative impact on the surrounding environment contributing to environmental well-being.

  The project activity is generating electricity through a technology that is environmentally safe and sound.

Table 1: Sustainable Development Contributions

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
Not Applicable	*Not Applicable*	*Not Applicable*	*Since PP did not monitor SDG activities during current or previous monitoring period as these are not mandatory till 2025, No SDG indicator and its impact has been reported.*	*Not Applicable*	*Not Applicable*

2 SAFEGUARDS

2.1 No Net Harm

In line with Ministry of Environment Forest and Climate Change, Govt. of India, Environmental Impact Assessment (EIA) is not mandatory for wind energy project. However, as per CLP's internal governance system, EIA is mandatory for all projects. Thus, EIA has been conducted before project installation and found that this project does not have any negative environmental and socio-economic impacts. Thus, this is not applicable for this project activity.

2.2 Local Stakeholder Consultation

CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited had identified different stakeholders for its solar power project as per the different phases of Implementation. Separate stakeholder consultations were carried out for all the three projects.

a) Representatives from O&M contractor;

b) Employees of CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited;

c) Contractor of CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited;

d) Villagers from nearby villages

100 MWAC Veltoor solar project by CLP India Private Limited, is located in Mehboobnagar district of Telangana. Further, 50 MWAC Gale Solarfarms Private Limited and 20 MWAC Tornado Solarfarms Private Limited are located in the dist. of Dhule, Maharashtra. As the project is located at two project sites, thus, two separate stakeholders' meeting were organized to receive comprehensive feedback from the local peoples. Description of the same are mentioned below:

At Veltoor project, the meeting was carried out by CLP India Private Limited on 18/07/2018 at the site office in Veltoor solar project at 02:00 pm. All stakeholders were invited via personal invitation letter and also by public notice.

As 50 MWAC Gale solar project and 20 MWAC Tornado solar project are located in Dhule, Maharashtra site. Thus, the meeting was combinedly carried out by Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited on 17/06/2018 at the Site office at 2:00 pm. All stakeholders were invited via personal invitation letters and public notices.

The local stakeholder meetings were carried out in each site of the project activity and the details of the same can be referred from the registered VCS PD. As a part of continuous feedback from stakeholders, along with the 3rd party O&M contractor, PP has also appointed independent Asset Managers at every site. These assets managers are responsible for site supervision and continuous day-to-day interaction with the local stakeholders e.g. local villagers, local govt. authorities and others. Based on the local requirements, PP has initiated several

CSR/sustainable development activities in the project catchment area. Further, PP has also 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. There was no comments received during current monitoring period.

2.3 AFOLU-Specific Safeguards

This section is not applicable for this project activity

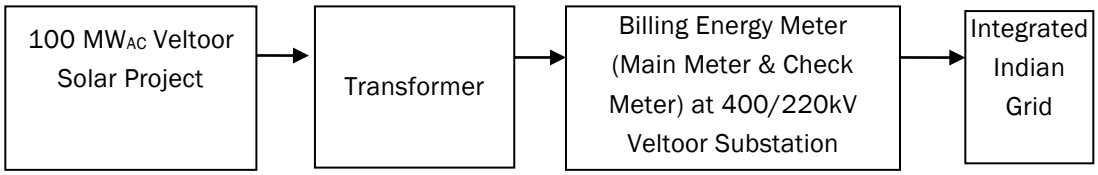
3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

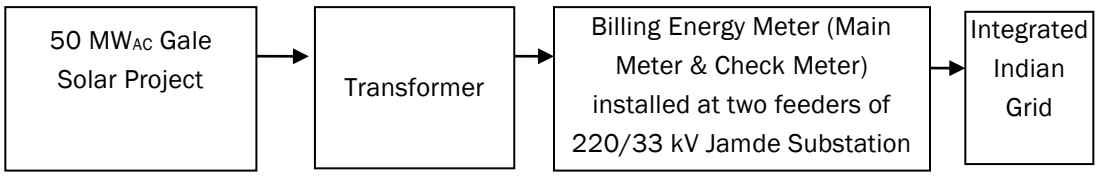
Implementation Status: All the solar projects have been commissioned and the Project is fully implemented. The commissioning dates of the projects have been provided in section 1.1

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.

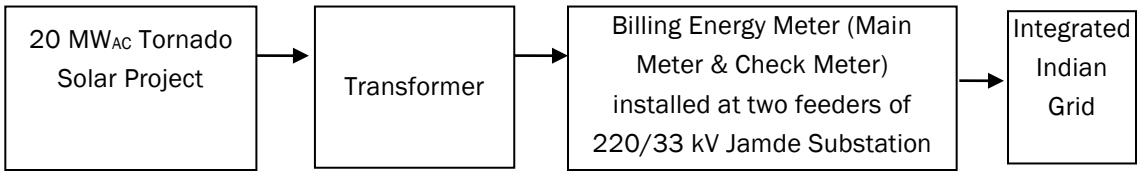
Monitoring equipment line diagram in Veltoor Site is detailed as below: -



Monitoring equipment line diagram in Gale Solar Site is detailed as below: -



Monitoring equipment line diagram in Tornado Site is detailed as below



3.2 Deviations

2.2.1 Methodology Deviations

There are no deviations related to methodology.

2.2.2 Project Description Deviations

There are no deviation considered during current monitoring period.

Below deviations were considered in previous verification:

- In Gale solar project, billing energy (main, check and standby) meters were replaced due to malfunctioning of the energy meters. Same replacement happened on 05/11/2020. Further, in Tornado Solar project, billing (main and check) energy meters were also replaced due to malfunctioning of the energy meters. Same replacement happened on 09/07/2020. Thus, deviation has been considered in this monitoring period.

- At the time of project registration, name of the legal owner of 100 MW_{AC} solar project was SE Solar Limited which was also subsidiary of CLP India Private Limited. However, on 20/02/2020, legal entity of SE Solar Limited has been legally merged with CLP India private Limited. Post-merger process, SE Solar has been dissolved. Now, legal owner of 100 MW_{AC} Veltoor solar project is CLP India Private Limited.

- At the time of project registration, CLP Wind Farms (India) Private Limited was the Project Proponent of this project activity. However, on 19/11/2019, CLP Wind Farms (India) Private Limited has gave up its rights and obligations in respect of the project and transferred all the rights to SE Solar Limited. Same has been communicated to VERRA in line with all the section 7.2.1 of Registration and Issuance Process issued by VERRA. Thus, post approval by VERRA, SE Solar has become Project Proponent of this VCS project activity. Further, as mentioned above, on 20/02/2020, legal entity of SE Solar Limited has been legally merged with CLP India private Limited. Thus, SE Solar Limited has gave up its rights and obligations in respect of the project and transferred all the rights to CLP India Private Limited. Same has also been communicated to VERRA in line with all the section 7.2.1 of Registration and Issuance Process issued by VERRA. Thus, post approval by VERRA, CLP India Private Limited is the Project Proponent of this VCS Project activity.

Thus, same change in project proponent have been accounted as Project Description deviations in line with section 3.18.2 of VCS standard version 4. However, this project deviation doesn't have an adverse impact in the applicability of the methodology, additionally or the appropriateness of the baseline scenario.

3.3 Grouped Projects

The project is not a grouped project.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO_2 /MWh
Description	Combined margin emission factor for Indian grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor for an electricity system"
Source of data	CO_2 baseline database (Version 14.0) published by CEA on Dec-2018
Value applied	0.9368
Justification of choice of data or description of measurement methods and procedures applied	This value is calculated using OM and BM values as per Version 7.0 of methodological tool to calculate the emission factor for an electricity system and using data base of CEA.
Purpose of Data	For the calculation of Emission Factor of the grid
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid,OM,y}$
Data unit	tCO2 /MWh
Description	Simple operating margin emission factor for Indian grid
Source of data	CO2 baseline database (Version 14.0) published by CEA on Dec-18
Value applied	0.9610
Justification of choice of data or description of measurement methods and procedures applied	This value is calculated by taking weighted average of Simple Operating Margin of recent three years for Indian grid as per the "Tool to calculate the emission factor for an electricity system", version 07.0.0

Purpose of Data	For the calculation of Emission Factor of the grid
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid,BM,y}$
Data unit	tCO2 /MWh
Description	Simple build margin emission factor for Indian grid
Source of data	CO2 baseline database (Version 14.0) published by CEA in Dec-18
Value applied	0.8644
Justification of choice of data or description of measurement methods and procedures applied	This value is calculated by taking weighted average of Simple build Margin of recent three years for Indian grid as per the "Tool to calculate the emission factor for an electricity system", version 07.0.0
Purpose of Data	For the calculation of Emission Factor of the grid
Comments	This parameter is fixed ex-ante for the entire crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{PJ, Veltoor, y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project Veltoor plant to the grid in year y
Source of data	Monthly Joint Meter Reading Report by state utility
Description of measurement methods and procedures to be applied	Data Type : Measured Monitoring equipment : Energy Meters are used for monitoring Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic Calibration frequency: 5 years Accuracy class: 0.2s Electricity exported/imported to the grid is in kWh. However, for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the Veltoor project activity will be calculated as a difference of electricity exported to the grid and electricity imported from the grid obtained from joint meter reading report notes issued by state utility as per below equation: $EG_{PJ,Veltoor,y} = EG_{Export, Veltoor} - EG_{Import, Veltoor}$

<table>
<tr><td></td><td>The calculation is done by state utility and project developer has no say in the calculation. Based on the joint meter reading report, the project shall raise the invoice.

Export readings of Main and Check meters shall be taken on monthly basis by authorized officer of state utility in the presence of PP or representative of CLP.

Cross Checking:

Quantity of net electricity supplied to the grid will be cross checked from the invoices raised by the project participant to the grid.</td></tr>
<tr><td>Frequency of monitoring/recording</td><td>Continuous monitoring, hourly measurement and monthly recording</td></tr>
<tr><td>Value monitored</td><td>192,374.01 MWh</td></tr>
<tr><td>Monitoring equipment</td><td>For Veltoor Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>XD551230 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>XD551231 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD551232 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table>
For Gale Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>X1305565 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>X1305566 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD462715 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table>
For Tornado Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>02892240 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>02892241 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table></td></tr>
</table>

		3	2892242 (Standby Meter)	Secure	0.2s
QA/QC procedures to be applied	• The energy meter reading are taken on monthly basis • Energy meters will be calibrated once in a five year in line with guidance stipulated by Central Regulatory Authority, Govt. of India and faulty meters will be duly replaced immediately. • Details of energy meters are mentioned in Annexture-1 • 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. • The Net electricity exported to the grid will be cross checked against the invoice raised by the PP towards the DISCOM				
Purpose of the data	To calculate Baseline Emissions calculation				
Calculation method	Not applicable				
Comments	The data will be kept for two years after the end of the crediting period or the last issuance of VCUs for this project activity, whichever occurs later.				

Data / Parameter	$EG_{PJ, Gale, y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project Gale plant to the grid in year y
Source of data	Monthly Joint Meter Reading Report by state utility
Description of measurement methods and procedures to be applied	Data Type : Measured Monitoring equipment : Energy Meters are used for monitoring Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic Calibration frequency: 5 years Accuracy class: 0.2s Electricity exported/imported to the grid is in kWh. However, for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the Gale project activity will be calculated as a difference of electricity exported to the grid and electricity imported from the grid obtained from joint meter reading report notes issued by state utility as per below equation: $EG_{PJ,Gale,y} = EG_{Export, Gele} - EG_{Import, Gale}$ The calculation is done by state utility and project developer has no

<table>
<tr><td></td><td>say in the calculation. Based on the joint meter reading report, the project shall raise the invoice.

Export readings of Main and Check meters shall be taken on monthly basis by authorized officer of state utility in the presence of PP or representative of PP.

Cross Checking:

Quantity of net electricity supplied to the grid will be cross checked from the invoices raised by the project participant to the grid.</td></tr>
<tr><td>Frequency of monitoring/recording</td><td>Continuous monitoring, hourly measurement and monthly recording</td></tr>
<tr><td>Value monitored</td><td>92,107.91 MWh</td></tr>
<tr><td>Monitoring equipment</td><td>For Veltoor Solar Site:
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<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>XD551230 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>XD551231 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD551232 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
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For Gale Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>X1305565 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>X1305566 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD462715 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table>
For Tornado Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>02892240 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>02892241 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>2892242 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table></td></tr>
</table>

QA/QC procedures to be applied	• The energy meter reading are taken on monthly basis • Energy meters will be calibrated once in a five year in line with guidance stipulated by Central Regulatory Authority, Govt. of India and faulty meters will be duly replaced immediately. • Details of energy meters are mentioned in Annexture-1 • 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. • The Net electricity exported to the grid has been cross checked against the invoice raised by the PP towards the DISCOM
Purpose of the data	To calculate Baseline Emissions calculation
Calculation method	Not applicable
Comments	The data will be kept for two years after the end of the crediting period or the last issuance of VCUs for this project activity, whichever occurs later.

Data / Parameter	$EG_{PJ, Tornado, y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project Tornado plant to the grid in year y
Source of data	Monthly Joint Meter Reading Report by state utility
Description of measurement methods and procedures to be applied	Data Type : Measured Monitoring equipment : Energy Meters are used for monitoring Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic Calibration frequency: 5 years Accuracy class: 0.2s Electricity exported/imported to the grid is in kWh. However, for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the Tornado project activity will be calculated as a difference of electricity exported to the grid and electricity imported from the grid obtained from joint meter reading report notes issued by state utility as per below equation: $EG_{PJ,Tornado,y} = EG_{Export, Tornado} - EG_{Import, Tornado}$ The calculation is done by state utility and project developer has no say in the calculation. Based on the joint meter reading report, the project shall raise the invoice.

<table>
<tr><td></td><td>Export readings of Main and Check meters shall be taken on monthly basis by authorized officer of state utility in the presence of PP or representative of PP.

Cross Checking:

Quantity of net electricity supplied to the grid will be cross checked from the invoices raised by the project participant to the grid.</td></tr>
<tr><td>Frequency of monitoring/recording</td><td>Continuous monitoring, hourly measurement and monthly recording</td></tr>
<tr><td>Value monitored</td><td>37,251.71 MWh</td></tr>
<tr><td>Monitoring equipment</td><td>For Veltoor Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>XD551230 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>XD551231 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD551232 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table>
For Gale Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>X1305565 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>X1305566 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>XD462715 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table>
For Tornado Solar Site:
<table>
<tr><th>Sl. No.</th><th>Meter Identification No</th><th>Meter Make</th><th>Accuracy Class</th></tr>
<tr><td>1</td><td>02892240 (Main Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>2</td><td>02892241 (Check Meter)</td><td>Secure</td><td>0.2s</td></tr>
<tr><td>3</td><td>2892242 (Standby Meter)</td><td>Secure</td><td>0.2s</td></tr>
</table></td></tr>
<tr><td>QA/QC procedures to be applied</td><td>• The energy meter reading are taken on monthly basis
• Energy meters will be calibrated once in a five year in line with guidance stipulated by Central Regulatory Authority, Govt. of India</td></tr>
</table>

	and faulty meters will be duly replaced immediately. • Details of energy meters are mentioned in Annexture-1 • 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. • The Net electricity exported to the grid has been cross checked against the invoice raised by the PP towards the DISCOM
Purpose of the data	To calculate Baseline Emissions calculation
Calculation method	Not applicable
Comments	The data will be kept for two years after the end of the crediting period or the last issuance of VCUs for this project activity, whichever occurs later.

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, would form 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.

Param Renewable Energy Ltd is the O&M contractor for veltoor project site and Mahindra Teqo Private Limited is the O&M contractor for Gale and Tornado project site. Further, all the companies will be responsible for maintaining respective monitoring data in respect of the project activity. CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited have implemented the management structure for managing the monitored data.

This approved monitoring methodology requires monitoring of the following:

Net electricity supplied from the project activity: While Emission factor of the project activity is fixed ex ante hence no further monitoring of this parameter is required. As per ACM0002 leakage need not be considered hence leakage has not been considered for the project activity. Hence, the sole parameter for monitoring is the net electricity supplied by the project activity to the grid.

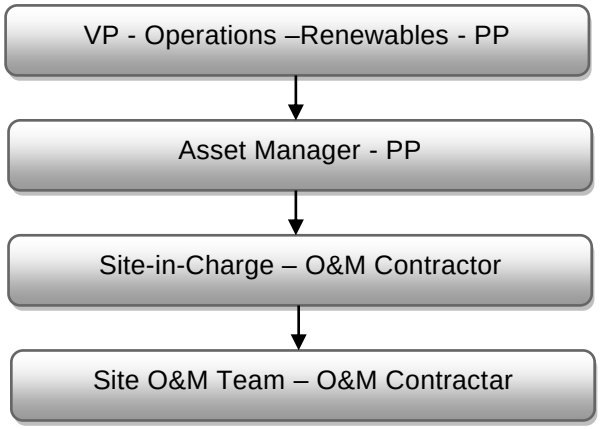
The Project activity is operated and managed by CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited respectively. CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited follow the documentation practices to ensure the reliability and availability of the data for all the activities as required from the identification of the site, resource assessment, logistics, finance, construction, commissioning and operation of the solar power project.

Monitoring roles and responsibilities

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

The monitoring plan is developed in accordance with the modalities and procedures for VCS project activities and is proposed for grid-connected solar power project being implemented in Telangana and Maharashtra, India. The monitoring plan, which will be implemented by CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited, describes about the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the respective project proponent. CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited proposed the following structure for data monitoring, collection, data archiving and calibration of equipment's for this project activity. The Project activity is operated and managed by the respective PP. CLP India Private Limited, Gale Solarfarms Private Limited and Tornado Solarfarms Private Limited follow the documentation practices to ensure the reliability and availability of the data for all the activities as required from the identification of the site, resource assessment, logistics, finance, construction, commissioning and operation of the solar power projects. The data for the project is compiled and subsequently stored by the PP. The roles and responsibilities for the project are described as below:



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 will be 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.

The solar power developer has installed main meter and check meter of static type 0.2s class accuracy of ABT Meters at the Interconnection Point. The solar power developer has also install stand-by meter of same accuracy as per the norms specified in the Metering Code by CEA. The

main meter, check meter and stand-by meter shall consist of a pair of export and import parameters with facility for recording meter readings using meter recording instrument.

All the meters have installed shall be jointly inspected and sealed and shall not be interfered with, tested or checked except in the presence of representatives of both parties. The meter readings of the main meter shall form the basis of billing. If any of the meters installed at interconnection point are found to be registering inaccurately the affected meter shall be replaced immediately.

During meter test check of the main meter and check meter indicates an error in the main meter beyond the permissible limits of error provided in the relevant standards (as defined in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, but no such error is indicated in the corresponding check meter, billing for the month shall be done on the basis of the reading of the check meter and the main meter shall be replaced immediately. If main meter and check meter indicate an error beyond the limits, billing for the month shall form the basis of the readings of the stand by meter, and the main meter and the check meter shall be replaced immediately.

Calibration Frequency

The main, check and standby meters shall be calibrated once in a five year in line with notification issued by Central Electricity Authority, Govt of India dated the 17th March, 2006. The meters would be tested by any accredited laboratory in the presence of the parties (State Electricity Board, Project investor and the O&M Contractor) involved. Both parties shall seal main and backup meters. Defective meters shall be replaced immediately. As per the schedule, calibration of all energy meter, instruments and equipment will be carried out once in five year and recorded in calibration reports.

Emergency Preparedness

In case of any abrupt breakdown, the fault will be immediately identified by the O&M personnel. All minor faults shall be taken care of by the O& M personnel, In case of any major faults, the grid personnel will be informed and replacement of the equipment shall be made within 24 hours.

Data Adjustment in case of monitoring period different from billing period:

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

D = (A/B)*C
A = Difference of number of days which are not matching of billing period and monitoring period.
B = Number of days of the billing period/ month which was not matched with the monitoring period.
C = Net Electricity supplied to the grid for that given billing period/ month

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

QA/QC Procedure

All the meters are calibrated/ tested once in five years. The calibration is done by the officials of the state utility. The accuracy of monitoring parameter is ensured by adhering to the calibration and testing of the metering equipment once in five years. QA/QC procedures have been as implemented by Discom/ State utility pursuant to the provisions of the power purchase agreement. In case the main meter(s) is found to operate outside the permissible limits, the main meter will be either replaced or calibrated immediately. Whenever a main meter goes defective, the consumption recorded by the Check meter will be referred. The project participant is monitoring the data for electricity generation and calibration reports post project implementation. Param Renewable Energy Ltd is the O&M contractor for veltoor project site and Mahindra Teqo Private Limited is the O&M contractor for Gale and Tornado project site. These O&M contractors has responsibility of maintaining electricity generation records, calibration records and maintenance of respective project. The project participant also maintains the records of daily generation report and joint meter report.

Personnel training

In order to ensure a proper functioning of the project activity and a properly monitoring of emission reductions, the staff are trained. The plant helpers are trained in equipment operation, data recording, reports writing, operation and maintenance and emergency procedures in compliance with the monitoring plan.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline emissions are calculated as follows:

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

Where:

BE_y	=	Baseline emissions in year y (tCO_2)
$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,CM,y}$	=	Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system"

Since the project activity is the installation of a new grid-connected renewable power plant/ unit at a site where no renewable power plant was operated prior to the implementation of the project activity, therefore:

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

Where:

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

Baseline Emission (BE_y):

Vintage	Net Electricity Export by Veltoor Project (MWh)	Net Electricity Export by Gale Project (MWh)	Net Electricity Export by Tornado Project (MWh)	Net Electricity Export by Project Activity (MWh)
2022 (21/09/2022 to 31/12/2022)	51,094.86	23,256.71	9,556.55	214,995.85
2023 (01/01/2023 to 31/08/2023)	141,279.15	68,851.20	27,695.16	106,737.78
	192,374.01	**92,107.91**	**37,251.71**	**321,733.63**

Baseline emissions (BE_y) are calculated as follows:

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

Baseline emissions for Project:

Vintage Period	Net Electricity Export (MWh)	Emission Factor (tCO2/MWh)	Baseline Emissions (tCO2)
2022 (21/09/2022 to 31/12/2022)	214,995.85	0.9368	201,408
2023 (01/01/2023 to 31/08/2023)	106,737.78	0.9368	99,991
TOTAL	**321,733.63**		**301,399**

5.2 Project Emissions

The project activity involves harnessing of wind energy and its conversion to electricity. Hence according to ACM0002 Version 19.0.0, there will be no project emissions in the project activity PEy = 0

5.3 Leakage

As per ACM0002 Version 19.0.0, no leakage has been considered for the calculation of emission factor.

5.4 Net GHG Emission Reductions and Removals

According to the approved methodology ACM0002 (Version 19) Emission Reductions are calculated as

$ER_y = BE_y - PE_y$

Where:

ER_y Emission reductions in year y (tCO2e/yr)

BE_y Baseline Emissions in year y (tCO2e/yr)

PE_y Project Emissions in year y (tCO2e/yr)

Thus,

ER_y = 301,399 - 0 tCO_2e

= 301,399 tCO_2e

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2022 (21/09/2022 to 31/12/2022)	201,408	0.00	0.00	201,408
2023 (01/01/2023 to 31/08/2023)	99,991	0.00	0.00	99,991
Total	**301,399**	**0.00**	**0.00**	**301,399**

The actual emission reductions for the current monitoring period are 10.14 % higher than estimated emission reductions which are mainly due to better availability of PLF at site. Availability of sunshine is a natural phenomenon which is beyond the control of CLP.

Ex-ante emissions reductions /removals	Achieved emissions reductions /removals	Percent difference	Justification for the difference
273,639	301,399	10.14 %	Higher availability of PLF at site. Availability of wind is a natural phenomenon which is beyond the control of project proponent.

APPENDIX 1: METER CALIBRATION DETAILS

A) Calibration details for 100 MW_{AC} Veltoor Solar Project in Telangana:

Sl. No.	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Validity Date
1	XD551230 (Main Meter)	Secure	0.2s	14/12/2018	13/12/2023
2	XD551231 (Check Meter)	Secure	0.2s	14/12/2018	13/12/2023
3	XD551232 (Standby Meter)	Secure	0.2s	14/12/2018	13/12/2023

B) Calibration details for 50 MW_{AC} Gale Solar Project in Dhule, Maharashtra:

Sl. No.	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Validity Date
1	X1305565 (Main Meter)	Secure	0.2s	05/11/2020	04/11/2025
2	X1305566 (Check Meter)	Secure	0.2s	05/11/2020	04/11/2025
3	XD462715 (Standby Meter)	Secure	0.2s	05/11/2020	04/11/2025

C) Calibration details for 20 MW_{AC}Tornado Solar Project in Dhule, Maharashtra:

Sl. No.	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Validity Date
1	02892240 (Main Meter)	Secure	0.2s	09/07/2020	08/07/2025
2	02892241 (Check Meter)	Secure	0.2s	09/07/2020	08/07/2025
3	2892242 (Standby Meter)	Secure	0.2s	09/07/2020	08/07/2025

Calibration frequency of the meter is once in five years. There was not any significant period of shut-down or break-down period during this monitoring period.