BUNDLED SOLAR POWER PROJECT BY SOLARARISE INDIA PROJECTS PVT. LTD.

Document Prepared by SolarArise India Projects Private Limited

Project title	Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd.
Project ID	1762-MP-07
Monitoring period	01-April-2023 to 30-September-2023 (Inclusive of both days)
Original date of issue	30-May -2024
Most recent date of issue	06-Nov-2024
Version	03
***VCS Standard* Version**	V4.7
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PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The main purpose of this project activity is to generate clean forms of electricity through renewable solar energy source.

Over the 10 years of first crediting period, the project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 244,968 tCO_2e per year, thereon displacing 253,776 MWh/year amount of electricity from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel-based power plant.

The details of the SPVs for the project and their location of installation are mentioned in the table below: -

Name of Investor	Capacity (MW)	COD	Connection with Grid	State	Usage
Talettutayi Solar Projects Pvt Ltd	10 MW	23-June-2016	Indian Grid	Telangana	Sale to State DISCOM
NV Vogt Solar One Pvt Ltd[1] (Talettutayi Solar Projects Six Pvt Ltd)	10 MW	23-June-2016	Indian Grid	Telangana	Sale to State DISCOM
Talettutayi Solar Projects Four Pvt Ltd	50 MW	10-August-2017	Indian Grid	Maharashtra	Sale to SECI
Talettutayi Solar Projects One Pvt Ltd	30 MW	05-January-2018	Indian Grid	Karnataka	Sale to SECI
Talettutayi Solar Projects Two Pvt Ltd	20MW	07-August-2019	Indian Grid	Karnataka	Sale to State DISCOM

These are the SPVs of SolarArise India Projects Pvt. Ltd. and the project is promoted by SolarArise India Projects Pvt. Ltd.

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Joint Validation and Verification	23-June-2016 to 25-April-2018	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	1 year, 10 months
Verification	26-April-2018 to 25-August-2020	VCS	4K Earth Science Pvt. Ltd.	2 years,4 months
Verification	26-August-2020 to 31-August-2021	VCS	TUV SUD South Asia Pvt. Ltd.	1 years,6 days
Verification	01-September-2021 to 31-March-2022	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	6 months
Verification	01-April-2022 to 30-September-2022	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	6 months
Verification	01-October-2022 to 31-March-2023	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	6 months
Verification	01-April-2023 to 30-September-2023	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	~6 Months
Total	23-June-2016 to 30-Sept-2023			7 years, 03 months, 08 days

Total emission reductions achieved in this monitoring period:

During the Current Monitoring Period from 01-April-2023 to 30-September-2023 (First and last date included), the project activity has supplied 120,412 MWh of electricity, and thus contributing to the GHG reductions 116,234 tCO_2e.

1.3 Sectoral Scope and Project Type

Complete the table below with information relevant for non-AFOLU projects:

Sectoral scope[1]	Energy industries (renewable / non-renewable sources)
Project activity type	Renewable Energy Projects

[1] *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*

Complete the table below with information relevant for AFOLU projects:

Sectoral scope	Not Applicable
AFOLU project category[2]	Not Applicable
Project activity type	Not Applicable

1.4 Project Proponent

Organization name	SolarArise India Projects Pvt. Ltd.
Contact person	Mr. Anant Agarwal
Title	Asst. Manager – ESG & Sustainability
Address	Unit No. 1004, 10th Floor BPTP Park Centra, Sector – 30, NH – 8, Gurugram – 122001
Telephone	0124 – 4204108
Email	anant.agarwal@solar-arise.com

1.5 Other Entities Involved in the Project

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

1.6 Project Start Date

Project start date	23-January-2016

[2] *See Appendix 1 of the* VCS Standard

Justification	This is the date of commissioning of 10 MW Solar PV Project activity in Talettutayi Solar Projects Pvt. Ltd. and 10 MW Solar PV Project activity by NV Vogt Solar One Pvt. Ltd (Talettutayi Solar Projects Six Pvt. Ltd.) The details of the commissioning dates of the individual project activity are mentioned in section 1.1 of this report.

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable ☐ Ten years, fixed ☒ Other (state the selected crediting period and justify how it conforms with the VCS Program requirements) As per the registered VCS PD crediting period for project activity is taken as 10 years renewable twice. Type of crediting period is in line with the Clause 3.8.1 of VCS standard v 3.7, valid and applicable at the time of registration of project.
Start and end date of first or fixed crediting period	23-June-2016 to 22-June-2026

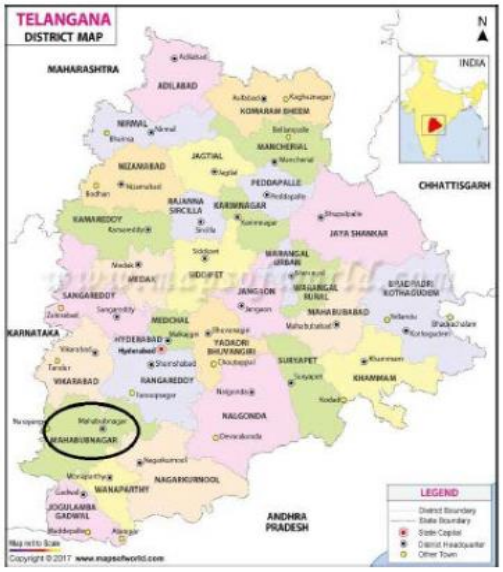
1.8 Project Location

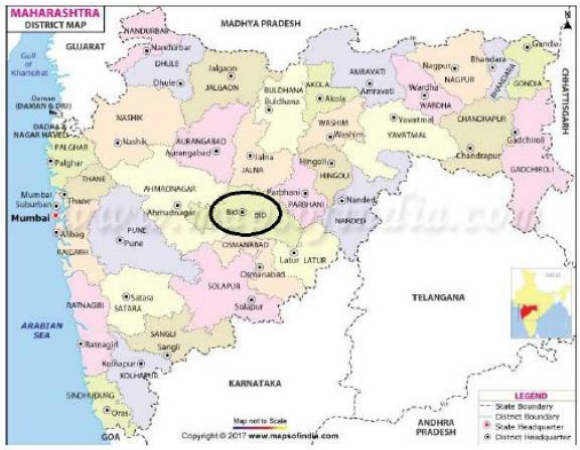
The details of the project locations are mentioned in the table below:

Name of Investor	Capacity (MW)	Location				
		State	District	Tehsil/ Taluka	Village	Lat/Long
Talettutayi Solar Projects Pvt Ltd	10 MW	Telangana	Mahabubnagar	Gadwal	Palwai	16.153°N, 77.763° E
Talettutayi Solar Projects Six Pvt Ltd (previously known as NV	10 MW	Telangana	Mahabubnagar	Gadwal	Palwai	16.266°N, 77.784° E

Vogt Solar One Pvt Ltd)						
Talettutayi Solar Projects Four Pvt Ltd	50 MW	Maharashtra	Beed	Telgaon	Chatgaon	18.966°N, 76.218°E
Talettutayi Solar Projects One Pvt Ltd	30 MW	Karnataka	Koppal	Yelburga	Chikkoppa and Mudhol	15.649N, 75.983E
Talettutayi Solar Projects Two Pvt Ltd	20MW	Karnataka	Koppal	Koppal	Kerahalli	15.371N, 76.306E

The project locations have been shown in the maps below.





1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	ACM0002	Grid-connected electricity generation from renewable sources	19.0
Tool	07	Tool to calculate the emission factor for an electricity system[3]	05.0
Tool	01	Tool for the demonstration and assessment of additionality[4]	07.0.0

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

If yes, provide required evidence of no double issuance as outlined by the VCS Standard.

1.10.2 Registration in Other GHG Programs

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

[3] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf

[4] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

☐ Yes ☒ No

If yes, provide the registration number and all relevant details.

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? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

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? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes ☒ No

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

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

If yes:

Is the project proponent(s) or authorized representative a buyer or seller of the product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, “Carbon credits may be issued through the Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities].”

☐ Yes ☒ No

If yes to all:
Provide evidence of the public statement. Evidence must be provided in this section or in an appendix.

1.12 Sustainable Development Contributions

The National CDM Authority (NCDMA), which is the Designated National Authority (DNA) for the Government of India (GOI) under the Ministry of Environment, Forests and Climate Change (MoEF&CC), has mentioned four indicators for sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India. Thus, this project's contribution towards sustainable development has been addressed based on the following sustainable development aspects:

- **Social well-being:**
    - Contribution to the development of an otherwise underdeveloped area.
    - Generation of employment opportunities for local people during various phases of the project activity.
- **Economic well-being:**
    - Since the project uses renewable solar power resources for power generation it does not lead to any emissions in the environment.
    - o Avoiding further depletion of the already over-exploited, limited non-renewable sources like coal, oil, etc.
- **Technological well-being:**
    - The technology selected for the power project would use well established Solar PV power generation and the project activity would promote the use of such technology.
- **Environmental well-being:**
    - Solar being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions and specific pollutants like SOx, NOx, and SPM associated with the conventional thermal power generation facilities.

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 120,412 MWh renewable electricity has supplied to Central Grid of Indian Electricity grid during the reported period that helps to increase the renewable energy share in the energy mix.	A total of 1,431,367 MWh renewable electricity has been supplied to the Indian grid by the project activity since commissioning and a total of ~879,591 MWh renewable electricity supply is expected over life of the project

<table>
<tr>
<td>2)</td>
<td>8.8</td>
<td>Protect labour rights and promote safe and secure working environments for all workers</td>
<td>Implemented activities to increase</td>
<td>The employees are trained in various aspects through regular training on site and attended by all available/concerned employees. The trainings target the complete workforce and safety/skill enhancement are the main objectives of the training. Following programs have been conducted to enhance the safety awareness, operational skill levels and occupational health management for the local staff:
<table>
<tr><th>Date</th><th>Name of Training</th></tr>
<tr><td>20-04-23</td><td>Work Permit training</td></tr>
<tr><td>23-04-23</td><td>Electrical Safety</td></tr>
<tr><td>30-04-23</td><td>Loto training</td></tr>
<tr><td>22-05-23</td><td>Heat Stroke</td></tr>
<tr><td>23-05-23</td><td>Heat Stress</td></tr>
<tr><td>25-05-23</td><td>Fire Fighting Training</td></tr>
<tr><td>25-05-23</td><td>HSE training</td></tr>
<tr><td>07-06-23</td><td>safety Practice during PM PM of electrical equipment’s and panels</td></tr>
<tr><td>20-06-23</td><td>First Aid against electrica</td></tr>
<tr><td>24-06-23</td><td>Road and drive Safety</td></tr>
<tr><td>27-06-23</td><td>Importance of environment safety and avoid plastic use at workplace</td></tr>
<tr><td>24-09-23</td><td>Fire extinguisher and method of use</td></tr>
<tr><td>26-09-23</td><td>EHS training</td></tr>
</table>
</td>
<td>To ensure occupational health and safety training has been conducted.</td>
</tr>
</table>

3)	13.2.2	Total greenhouse gas emissions per year avoided or removed	Implemented activities to increase	By generating 120,412 MWh renewable electricity the project has avoided emission of 116,234 tCO2e in the atmosphere.	Since commissioning, the project has avoided emission of 1,381,699 tCO2e in the atmosphere. and a total of ~824001 tCO2 is expected to be avoided over life of the project.

1.13 Commercially Sensitive Information

There is no commercial sensitive information related the project activity. All information is provided in the public version of the project documents.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Stakeholder Identification	The main stakeholders of this project identified by the project participant are the local villagers who are the main population of this area. Other stakeholders are the unskilled labour, operations and maintenance team of the project activity.
Legal or customary tenure/access rights	The land on which the Solar Panels are installed is owned by the Project Participant which has project lifetime of 25 years.
Stakeholder diversity and changes over time	The project owner has conducted and stakeholder meeting during the start of registration process of this project under the VCS mechanism. In this stakeholder meeting, diverse stakeholders such as local villagers (villages nearby the project site), state utility officials, NGOs were invited. The project owner has explained the various benefits and advantages of this project including the economic impact on the local area. Over the period of the year, the nature of the stakeholders has not changed.
Expected changes in well-being	Over the course of the project implementation, there has been a considerable and positive impact on the livelihood of the local people. The project activity has generated employment to the local people, development of new skills

	for the locals by providing trainings and exposing to various awareness programs.
Location of stakeholders	The main stakeholders of this project are: • State utility which includes transmission and distribution companies which have offices at local (block level) and as well as State Capital. Villagers/local citizens- they are located near the project area. The project has positive impact on the local people has it has generated employment (temporary/permanent) opportunities for them.
Location of resources	The land on which the Solar Panels are installed belongs to the project owner. The locations of all Solar Panels are provided in Section 1.8.

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	For on-going consultation, the project proponent has kept grievance register in plant site office and sought comments/grievances from the local stakeholders. The representative of PP addresses the grievances if any to the stakeholders and communicates them on regular basis. PP has also kept provision for submitting comments/grievances from local stakeholder through direct emails. Below are the details: • Company Website: **https://www.solararise.com/** • Email: **info@solar-arise.com** During the current monitoring period, no negative comments were received from the local stakeholders.
Date(s) of stakeholder consultation	The project activity is in 3 different states (Maharashtra, Karnataka and Telangana) and involves 5 project developers; hence stakeholder consultation was conducted in phases. As per the registered joint VCS PD&MR, the local stakeholder's consultation was carried out at project sites as following:

Project developer	Location	Capacity (MW)	Date and mode of invitation	Meeting location	Date of meeting
Talettutayi Solar Projects Pvt Ltd	Mahabubnagar district in Telangana, India	10	24/04/2015 Public notice	Project site office	04/05/2015
NV Vogt Solar One Pvt Ltd	Mahabubnagar district in Telangana, India	10	24/04/2015 Public notice	Project site office	04/05/2015
Talettutayi Solar Projects One Pvt Ltd	Koppal district in Karnataka, India	30	14/01/2017 Public notice	Project site office	21/01/2017
Talettutayi Solar Projects Two Pvt Ltd	Koppal district in Karnataka, India	20	14/01/2017 Public notice	Project site office	21/01/2017
Talettutayi Solar Projects Four Pvt Ltd	Beed district In Maharashtra, India	50	10/09/2016 Public notice	Project site office	17/09/2016

Communication of monitored results	The main outcomes and benefits of the project activity like the total power generated, the employment opportunities and economic

	development of the villages near the project site was explained to all the stakeholders.
Consultation records	The consultation with stakeholders was documented in the forms of Minutes of Meeting consisting outcome of the consultation process and the same has been shared with the stakeholders.
Stakeholder input	During the stakeholder's consultation process, the below inputs were received for the project: Q1: Will there be free supply of power to the local people? PP response: The generated power will be fed in the grid. Project promoters can't supply directly power to the local people. They must get authorized connection from Govt. body. But due to the project activity the supply of power in the area will increase. Q2. Will there be employment generation due to the project activity for youth from the adjoining areas? PP response: Responding about the increased possibilities for employment of local youth due to the project activity, it was pointed out that preference would be given for locals in the employment opportunities. Q.3 Will the project release any pollutants or hazardous, toxic or noxious substances to air? PP response: No, not from what we know, there is no project emissions associated to the project & does not have any negative impacts. As a part of continuous feedback from stakeholders, the grievances register is being placed at site and is being continuously monitored and addressed through the grievances cell on regular basis and maintained in a register at site office. Stakeholders can provide their input or concerns over the project anytime. The site manager is responsible for addressing the grievances received from the stakeholders. The same was also stated during the stakeholder consultation meeting. Additionally, PP will consult stakeholders annually to check the requirements of any developmental activities in the villages and PP may allot the CSR fund to activities based on the need basis. The mechanism will ensure to continue to engage with local stakeholders in an ongoing proactive manner.

2.1.3 Free, Prior, and Informed Consent

Consent	The project area legally belongs to the Project Proponent and no conflicts have arisen related to the rights of the project, the project location or any other disagreements with any stakeholders.
Outcome of FPIC	The project site belongs to the Project Proponent, and it has a legal document of its rights over the Land. In the process, there has no displacement or relocation of the local villages. Since the start of the project activity there has been many positive economic impacts which has greatly contributed to the upliftment of the region.

2.1.4 Grievance Redress Procedure

Grievances received	*Resolution and outcome*
No grievances received during the monitoring period.	There is a grievance register which is kept at the project site. Any stakeholder who has comments/complaints can contact as per the details mentioned. The Project representative would address the complaints on immediate basis.

2.1.5 Public Comments

Summary of comments received	Actions taken
No negative comments have been received	Since the commissioning, there has been no change in the project design and therefore any updates were not necessary.

2.2 Risks to Stakeholders and the Environment

	Risk identified	Mitigation or preventative measure taken
Risks to stakeholder participation	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024	-
Working conditions	-	-
Safety of women and girls	-	-
Safety of minority and marginalized groups, including children	-	-
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	-	-

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

Discrimination and sexual harassment	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024
Management experience	-
Gender equity in labor and work	-

Human trafficking, forced labor, and child labor	-

2.3.2 Human Rights

This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025.

Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024

2.3.3 Indigenous Peoples and Cultural Heritage

This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025.

Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024

2.3.4 Property Rights

Disputes over rights to territories and resources	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024
Respect for property rights	-

2.3.5 Benefit Sharing

Summary of the benefit sharing plan	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024

Benefit sharing during the monitoring period	-

2.4 Ecosystem Health

	Risk identified	Mitigation or preventative measure taken during the monitoring period
Impacts on biodiversity and ecosystems	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024	-
Soil degradation and soil erosion	-	-
Water consumption and stress	-	-
Usage of fertilizers	-	-

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024

2.4.2 Introduction of species

Species introduced	Classification	Justification for use	Adverse effects and mitigation

This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024	-	-	-

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

2.4.3 Ecosystem conversion

This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025.

Ref: APRIL 2024 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES Release Date: 16 April 2024

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity involves the installation of Solar PVs. The total installed capacity of the project is 120 MW located across different states in India. The project is promoted by SolarArise India Projects Pvt. Ltd.

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

The project shall result in annual replacement of anthropogenic emissions of greenhouse gases (GHGs) estimated to be approximately 244,968 tCO2e, thereon displacing 253,776 MWh/year amount of electricity from the gird over the 10 years crediting period.

Solar PV Project Technology Details –

The project activity aims to harness solar energy through installation of Solar PVs with total installed capacity of 120 MW.

a) The technical specification of 10 MW plant interconnection with grid on 23-June-2016 by Talettutayi Solar Projects Pvt Ltd are as follows:

S. No	Technical details of the equipment	Description
1	Technology Used	Poly Crystalline Silicon
2	Make of modules installed	Trina Solar
3	Model of the modules installed	TSM-310PC14, TSM-315PC14
4	Make & Model of Inverter	Make – ABB, Model - PVS-800-1000KW
5	Number of Inverters	10 Nos.
6	Make & Number of Transformers	Make- Voltamp Model- 2 MVA, 5 Nos.

b) The technical specification of 10 MW plant interconnection with grid on 23-June-2016 by NV Vogt Solar One Pvt Ltd are as follows:

S. No	Technical details of the equipment	Description
1	Technology Used	Poly Crystalline Silicon
2	Make of modules installed	Trina Solar
3	Model of the modules installed	TSM-310PC14, TSM-315PC14
4	Make & Model of Inverter	Make – ABB, Model - PVS-800-1000KW
5	Number of Inverters	10 Nos.
6	Make & Number of Transformers	Make- Voltamp Model- 2 MVA, 5 Nos.

c) The technical specification of 50 MW plant interconnection with grid on 10-August-2017 by Talettutayi Solar Projects Four Pvt Ltd are as follows:

S. No	Technical details of the equipment	Description
1	Technology Used	Poly Crystalline Silicon
2	Make of modules installed	JA Solar
3	Model of the modules installed	320 Wp & 325 Wp
4	Make & Model of Inverter	Make- Sungrow, Model- SG 2500
5	Number of Inverters	20 Nos.
6	Make & Number of Transformers	Make- Sudhir, Model- 5 MVA, 10 Nos. Make- Voltamp, Model- 50 MVA, 1 No.

d) The technical specification of 30 MW plant interconnection with grid on 05-January-2018 by Talettutayi Solar Projects One Pvt Ltd are as follows:

S. No	Technical details of the equipment	Description
1	Technology Used	Poly Crystalline Silicon
2	Make of modules installed	JA Solar
3	Model of the modules installed	320 Wp & 325 Wp
4	Make & Model of Inverter	Make- Sungrow, Model- SG 2500
5	Number of Inverters	12 Nos.
6	Make & Number of Transformers	Make- Silchar, Model- 5 MVA, 6 Nos. Make- Raychem, Model- 30 MVA, 1 No.

e) The technical specification of 20 MW plant interconnection with grid on 07-August-2019 by Talettutayi Solar Projects Two Pvt Ltd are as follows:

S. No	Technical details of the equipment	Description
1	Technology Used	Poly Crystalline Silicon
2	Make of modules installed	JA Solar
3	Model of the modules installed	325 Wp & 330 Wp
4	Make & Model of Inverter	Make- TBEA, Model- TBEA 3750, TBEA 5000
5	Number of Inverters	5 Nos. (4 Nos of TBEA 3750 and 1 Nos of TBEA 5000)
6	Make & Number of Transformers	Make- Silchar, Model- 5 MVA & 7.5MVA, 3 Nos. Make- Voltamp, Model- 20 MVA, 1 No.

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.

3.2 Deviations

3.2.1 Methodology Deviations

No methodology deviation is applied during the monitoring period.

3.2.2 Project Description Deviations

No deviation has been applied in this monitoring period.

Below deviation has been applied in the last monitoring period: -

In the registered PD, formula used in the calculation net electricity supplied to the grid was not mentioned correctly for the Karnataka state projects, hence the same was corrected in line with the JMRs (Form-B). This correction was considered as project deviation in the current monitoring period. The formula used in the monitoring plan for calculating the net electricity supplied to the grid was based on the B-Form values provided by KPTCL as follows for the Karnataka state projects: -

EGPJ, y = Export (Kwh)– 115% * Import (Kwh)– Transmission losses (Kwh)

This was in line with the actual monitoring procedure followed on the project activity.

The above deviation is in line with VCS rule. However, it did not impact the existing applicability conditions of the methodology, additionality or the appropriateness of the baseline scenario

This deviation has been validated, accepted and approved by VERRA and valid for the current monitoring period.

3.3 Grouped Projects

The project is not a grouped project thus 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_2/MWh
Description	Operating margin CO_2 emission factor for the project electricity system in year y
Source of data	Calculated from CEA database, Version 12, May 2017[5]
Value applied	0.9843 tCO_2/MWh
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 05" as 3-year generation weighted average using data for the years 2013-14, 2014-15 & 2015-16. The data are obtained from "CO2 Baseline Database for Indian Power Sector" version 12, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid, BM, y}$
Data unit	tCO_2/MWh
Description	Build margin CO2 emission factor for the project electricity system in year y
Source of data	Calculated from CEA database, Version 12, May 2017[6]
Value applied	0.9083 tCO_2/MWh

[5] http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver12.pdf

[6] http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver12.pdf

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 05" as per the latest data available for the most recent year 2015-16. The data is obtained from "CO2 Baseline Database for Indian Power Sector" version 12, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	Calculation of baseline emissions
Comments	The above value is fixed, and it is same for the entire crediting period
Comments	The above value is fixed, and it is same for the entire crediting period

Data / Parameter	$EF_{grid, CM, y}$
Data unit	tCO_2/MWh
Description	Combined margin CO_2 emission factor for the project electricity system in year y
Source of data	Calculated from CEA database, Version 12, May 2017
Value applied	0.9653 tCO_2/MWh
Justification of choice of data or description of measurement methods and procedures applied	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ Where: $EF_{grid,BM,y}$= Build margin CO_2 emission factor in year y (tCO_2/MWh) $EF_{grid,OM,y}$= Operating margin CO_2 emission factor in year y (tCO_2/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM}= Weighting of build margin emissions factor (%) = 25%
Purpose of data	Calculation of baseline emissions
Comments	This parameter is fixed ex-ante for the entire crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{PJ, y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Source of data	Credit note/ JMR/Form B reports/ monthly generation report from respective state electricity board/DISCOM
Description of measurement methods and procedures to be applied	The difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value will be considered for ER calculations.

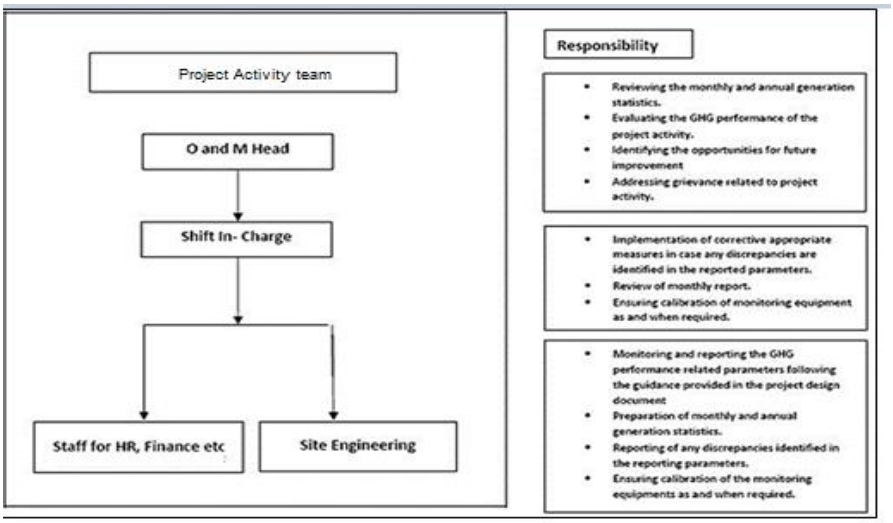
	For detailed schedule of Calibration of energy meters involved in project activity please refer Appendix 2.
Frequency of monitoring/recording	Continuous measurement & monthly recording
Value monitored	120,412 MWh
Monitoring equipment	Energy meters are used to measure the electricity exported / supplied by the plant to pooling substation and further to UPPCL substation. The details of meters are provided under Appendix-2.
QA/QC procedures to be applied	The meters are approved, tested & sealed by the State Utility. The meters are in the custody of State Utility. The frequency of calibration is once in 5 years. The monthly electricity supplied/exported by the project activity in the JMR report is cross checked with the monthly invoices of sale. In the absence or delay in the meter calibration. appropriate guidelines will be applied appropriately to confirm the conservativeness of metering. The metering arrangement, accuracy class of meters, calibration frequency is under control of state electricity board and PP do not have any control on it. PP is getting value of net electricity supplied to grid and the same is considered the monitoring parameter. The billing is raised based on substation meters.
Purpose of the data	Calculation of baseline emissions
Calculation method	Net electricity supplied to the grid by the project plant in a given month = Export (kWh)– Import (kWh)
Comments	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.

4.3 Monitoring Plan

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. The monitoring plan, implemented by the project participant describes the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

Currently Jackson group is taking care of the operation and maintenance for the project activity.

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the project participant. PP proposed the following structure for data monitoring, collection, data archiving and calibration of the equipment's for this project activity. The team comprises of the following members:



Data Measurement

The export and import energy will be measured continuously using above mentioned Main and Check meters located at the substations. Readings of meters shall be taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP (Jackson group). Based on the Meter Reading Statement to PP, invoices will be raised. These invoices can be used for cross-checking the meter readings taken for the respective project activity.

Data collection and archiving

Readings from meters will be collected in the presence of the plant in-charge. Export and Import data would be recorded and stored in logs as well as in electronic form on a daily basis. The records are checked periodically by the Plant Manager and discussed thoroughly with the plant supervisor. The period of storage of the monitored data will be 2 years after the end of crediting period or till the last issuance of VCUs for the project activity whichever occurs later.

Emergency preparedness

The project activity will not result in any unidentified activity that can result in substantial emissions from the project activity. No need for emergency preparedness in data monitoring is visualized.

In the event that the main meter, which is used to record the net electricity exported by the project, is found to be faulty it will be repaired or replaced and the data from the check meter will be used in its place. In the unlikely event that the check meter fails it will also be repaired or replaced.

Personnel training

In order to ensure a proper functioning of the project activity and a properly monitoring of emission reductions, the staff will be trained. The plant helpers will be trained in equipment operation, data

recording, reports writing, operation and maintenance and emergency procedures in compliance with the monitoring plan.

QA/QC procedures

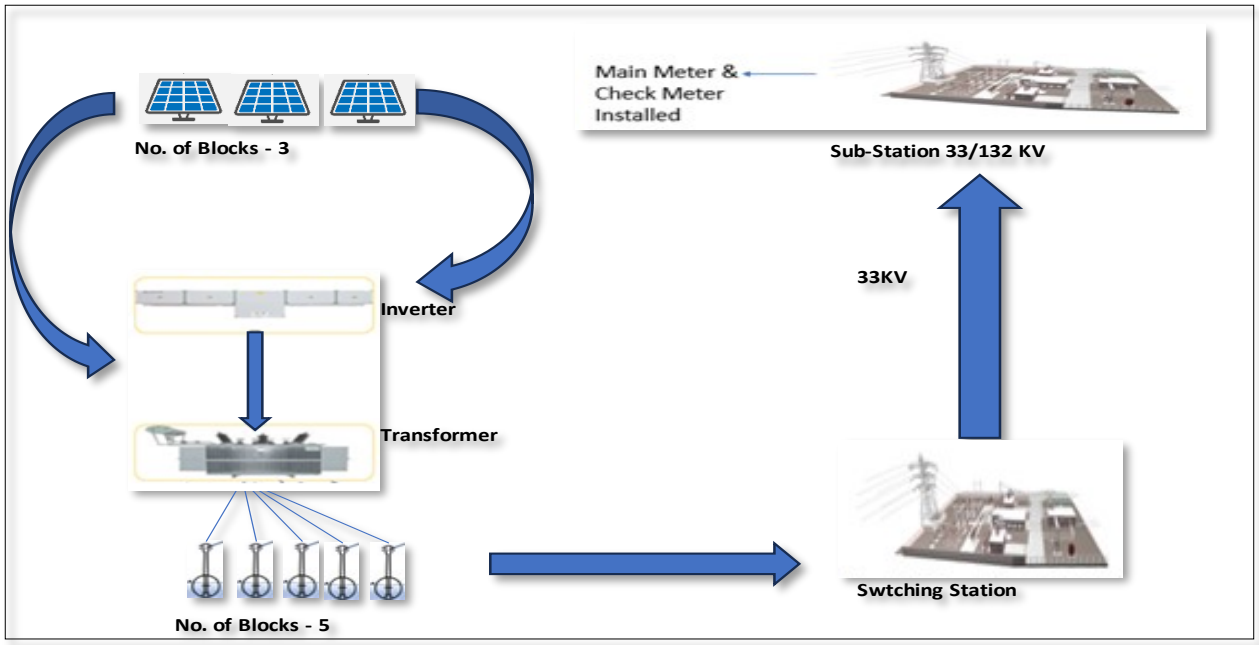
The energy meters at the feeders are maintained and owned by the state electricity board. Neither the project proponent nor the site personnel have any control over it. The records will be crosschecked with the records of sold electricity to state electricity board. The meters are calibrated by the state electricity board at least once in five years.

Apportioning

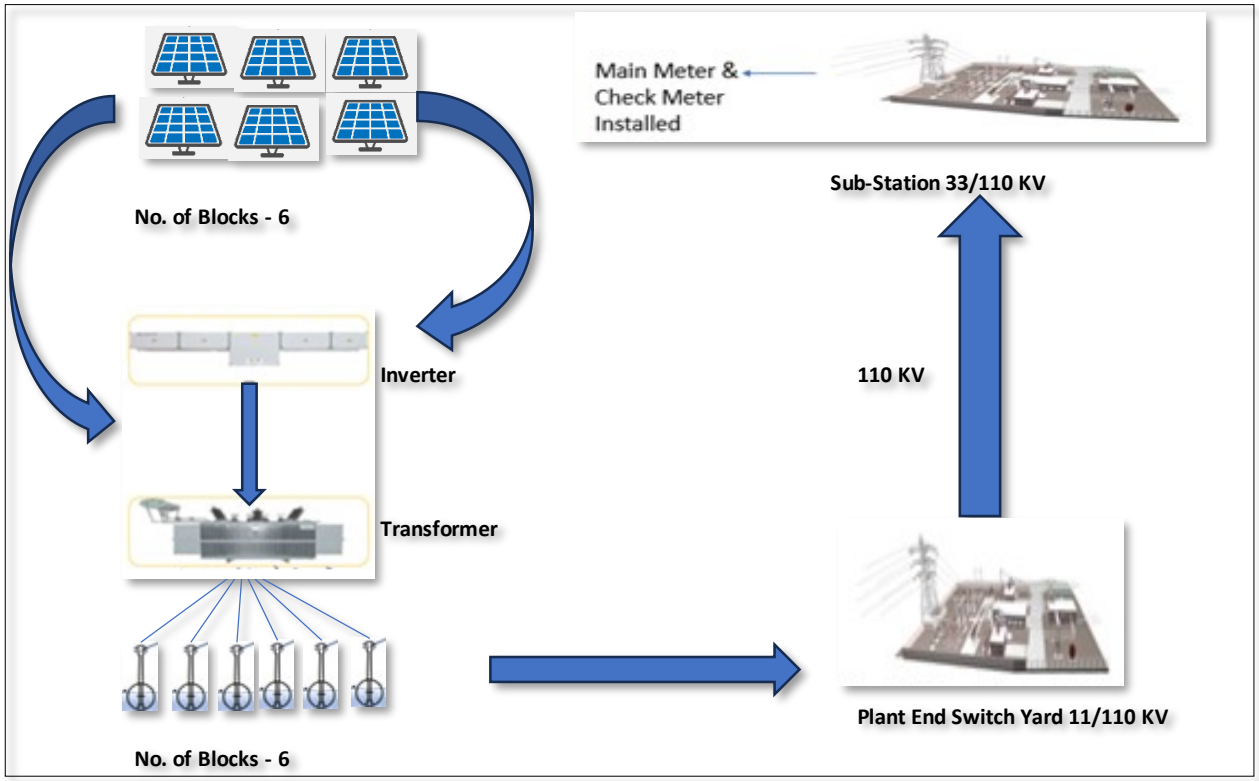
In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from: Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate/ JMR Report / Credit Notes certified 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.

Single Line Diagram

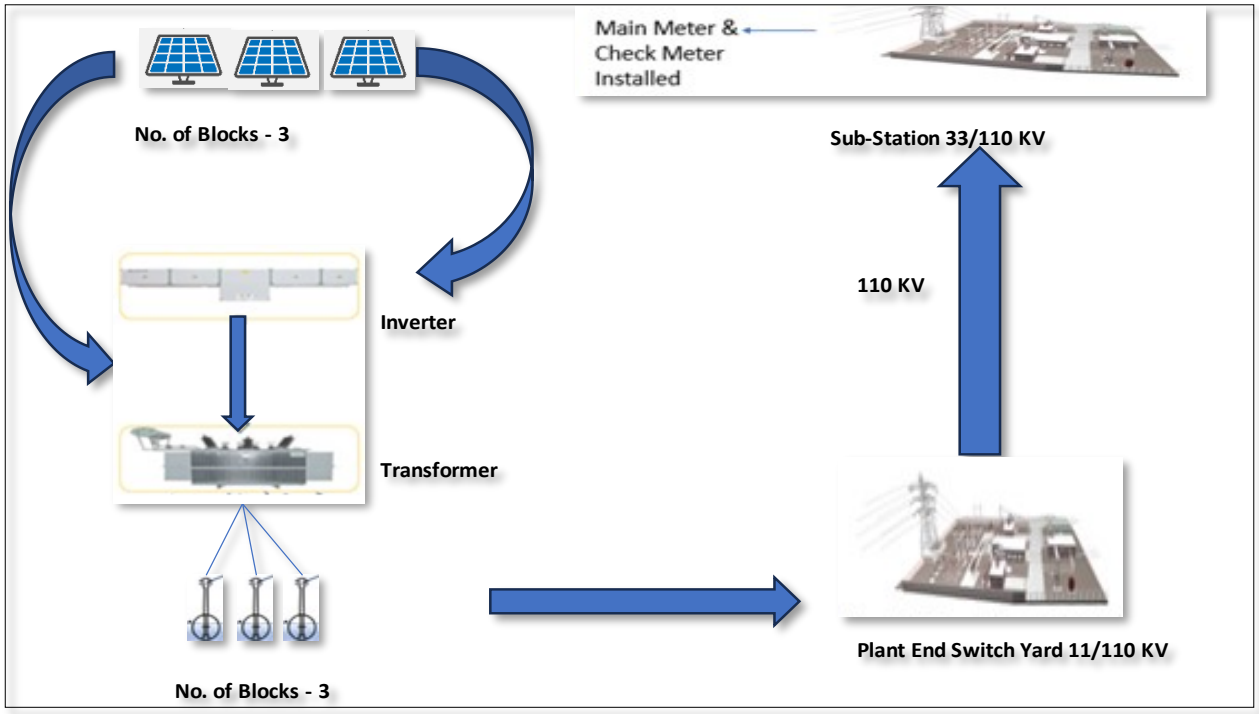
Talettutayi Solar Projects Pvt Ltd:



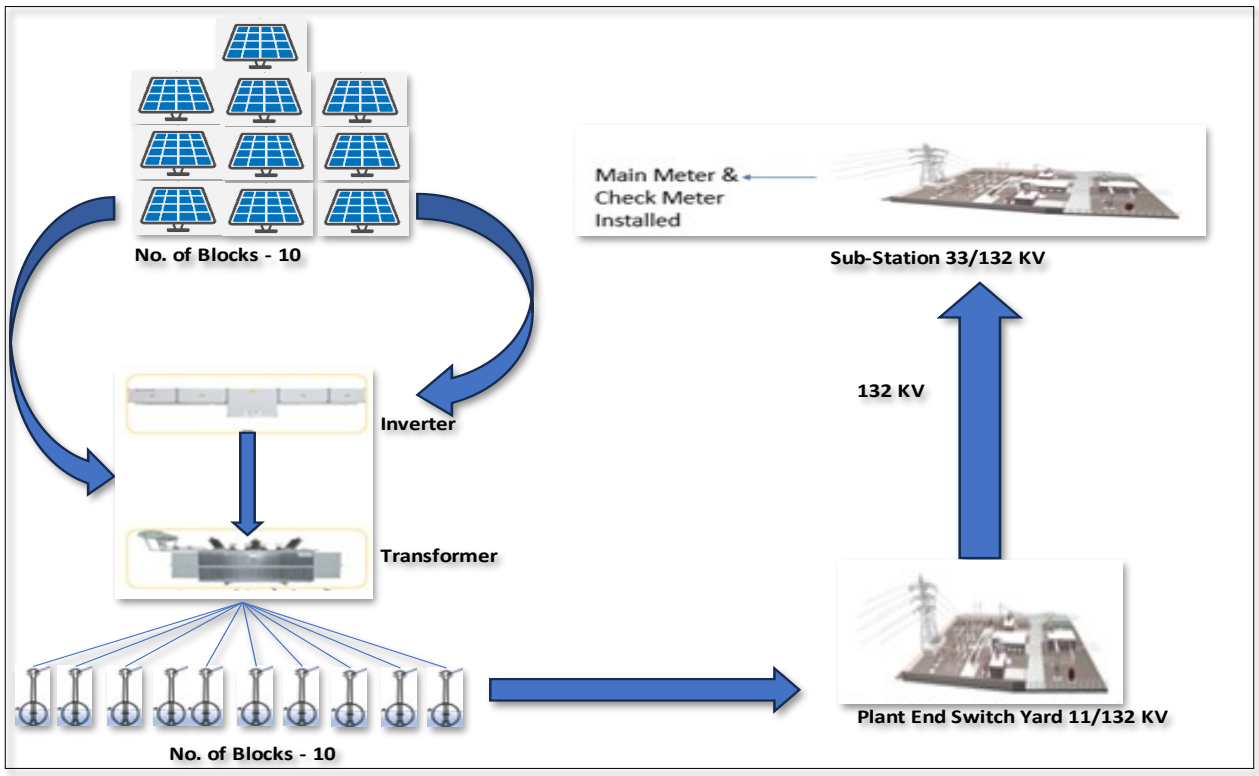
Talettutayi Solar Projects Pvt One Ltd:



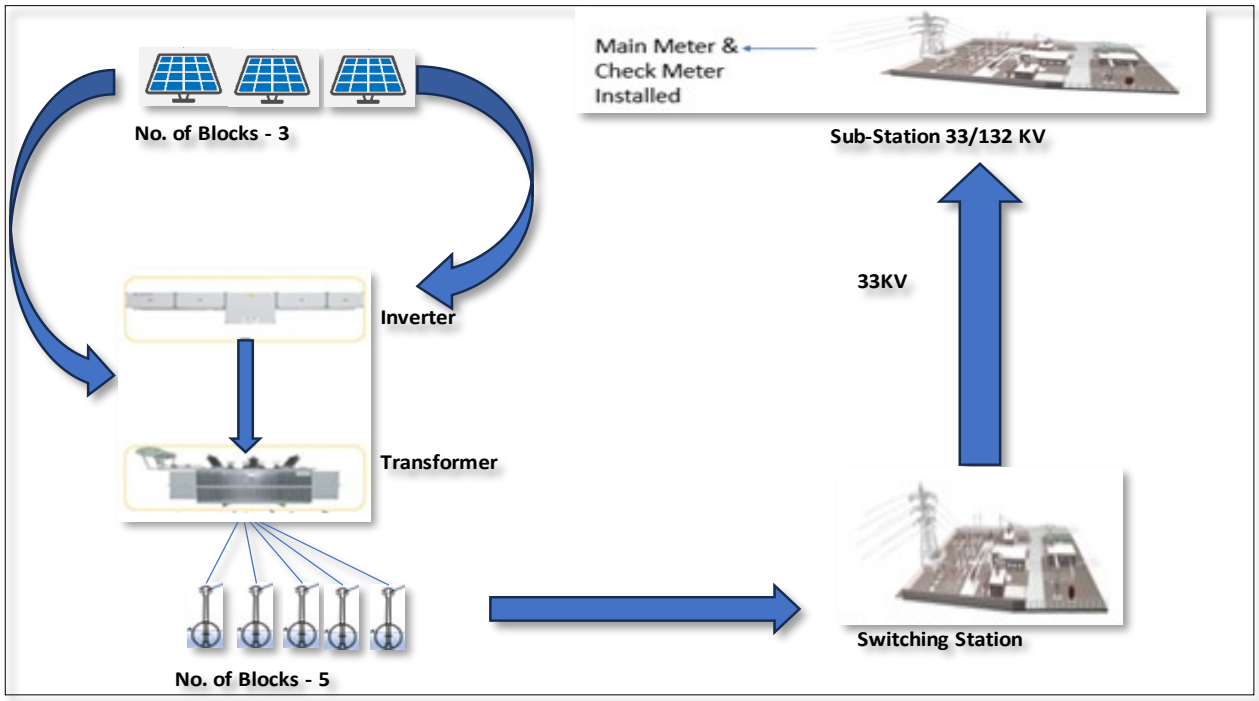
Talettutayi Solar Projects Pvt Two Ltd:



Talettutayi Solar Projects Pvt Four Ltd:



Talettutayi Solar Projects Pvt Six Ltd:



5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

As per the approved consolidated Methodology ACM0002 (Version 19.0) para 42:

Baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that existing grid- connected power plants and the addition of new grid- connected power plants would have generated all project electricity generation above baseline levels. The baseline emissions are to be calculated as follows:

$$BEy = EG_{PJ,\,y} \times EF_{grid,\,CM,\,y}$$

Where:

BE_y = Baseline emissions in year y (tCO_2/yr)

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

$EF_{grid, CM,y}$ = 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" (t CO_2/MWh)

Grid Emission Factor

The grid emission factor is fixed ex-ante in the PD as given below:

Parameter	Value
OM	0.9843
BM	0.9083
CM	0.9653

Therefore,

BE_y = 120,412 x 0.9653

= 116,234 tCO_2e (Rounded Down)

5.2 Project Emissions

Not Applicable, since project emissions from the solar power project activity is zero as per ACM0002 methodology. Hence, PEy = 0

5.3 Leakage Emissions

Not Applicable, since leakage emissions from the solar power project activity is zero as per ACM0002 methodology. Hence, LEy= 0.

5.4 GHG Emission Reductions and Carbon Dioxide Removals

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
2023 (01-April-2023 to 30-September-2023)	116,234	0	0	116,234	-	116,234
Total	116,234	0	0	116,234	-	116,234

Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference

2023 (01-April-2023 to 30-September-2023)	122,820	116,234	-5.36%	During the months of June, July and September the plants have observed lower irradiance due to inclement weather and heavy monsoon conditions at certain plant locations which has decreased the estimated generation output. The generation of electricity depends upon many other climatic conditions, and not within the control of the project participant.
Total	122,820	116,234	-5.36%	-

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Section	Information	Justification
-	Not applicable	Not applicable

APPENDIX 2 : METER CALIBRATION DETAILS

a. **Meter Calibration details of 10 MW solar project by Talettutayi Solar Projects Pvt Ltd**

Metering Location: 132/33 kV Substation Control Room, Gadwal.

Meter Sl. No.	Make	Class	Calibration date	Due date for Calibration
APX00685 (Main Meter)	Secure	0.2 s	24-August-2022	23-August-2027
APX00686 (Check Meter)	Secure	0.2 s	24-August-2022	23-August-2027
APX00687(Standby Meter)	Secure	0.2 s	24-August-2022	23-August-2027

b. **Meter Calibration details of 10 MW solar project by Talettutayi Solar Projects Six Pvt Ltd**

Metering Location: 132/33 kV Substation Control Room, Gadwal.

Meter Sl. No.	Make	Class	Calibration date	Due date for Calibration
APX00682 (Main Meter)	Secure	0.2 s	24-August-2022	23-August-2027
APX00684 (Check Meter)	Secure	0.2 s	24-August-2022	23-August-2027
APX00704(Standby Meter)	Secure	0.2 s	24-August-2022	23-August-2027

c. **Meter Calibration details of 50 MW solar project by Talettutayi Solar Projects Four Pvt Ltd**

Metering Location: Control Room, 132kV Telgaon Sub-Station

Meter Sl. No.	Make	Class	Calibration date	Due date for Calibration
02832405 (Main Meter)	Elster	0.2 s	08-December-2021	07-December-2026
02832406 (Check Meter)	Elster	0.2 s	08-December-2021	07-December-2026
02832404 (Standby Meter)	Elster	0.2 s	08-December-2021	07-December-2026

d. **Meter Calibration details of 30 MW solar project by Talettutayi Solar Projects One Pvt Ltd**

Metering Location: 110/33/11 KV MUSS Yelburga substation

Meter Sl. No.	Make	Class	Calibration date	Due date for Calibration
20007786 (Main Meter)	L&T	0.2 s	12-April-2022 & 09-January-2023 & 19-August-2023	11-April-2027 & 08-January-2028 & 18-August-2028
20007853 (Check Meter)	L&T	0.2 s	12-April-2022 & 09-January-2023 & 19-August-2023	11-April-2027 & 08-January-2028 & 18-August-2028

e. **Meter Calibration details of 20 MW solar project by Talettutayi Solar Projects Two Pvt Ltd**

Metering Location: 110/33/11 KV Kerehalli substation

Meter Sl. No.	Make	Class	Calibration date	Due date for Calibration
20009519 (New Main Meter)	L&T	0.2 s	16-February-2022 & 16-January-2023 & 29-August-2023	15-February-2027& 15-January-2028 & 28-August-2028
20009520 (New Check Meter)	L&T	0.2 s	16-February-2022 & 16-January-2023 & 29-August-2023	15-February-2027& 15-January-2028 & 28-August-2028