Gold Standard for the Global Goals

TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.1**

RELATED SUPPORT **- TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

Key Project Information

SC-Restricted

KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	7792
Title of the project (s) covered by monitoring report	10 MW Solar Photovoltaic Power Plant in Rajkot, Gujarat (India)
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	2.1
Version number of the monitoring report	05
Completion date of the monitoring report	04/02/2025
Date of project design certification	13/02/2022
Date of Last Annual Report	Not applicable[1]
Monitoring period number	1
Duration of this monitoring period	01/01/2020 to 30/12/2022 (Both days inclusive)
Project Representative	Green Infra Solar Energy Limited
Host Country	India
Activity Requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	AMS-I.D: Grid connected renewable electricity generation, Version 18.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

[1] The date of annual report is not applicable for the project activity.

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 7 - Affordable and Clean energy contribution to Climate security and sustainable development	Renewable electricity generated	46,058	MWh
SDG 8 – Decent Work and Economic growth	Training provided to internal O & M staffs and external	12	Nos
	Employees	16	Nos
SDG 13 – Climate Action (GS VER)	GHG emission reduction	43,046	VER (tCO_2)

Table 2 – Product Vintages

		Amount Achieved		
Start Dates	End Dates	GS VER	NA	NA
01/01/2020	31/12/2020	14,713	-	-
01/01/2021	31/12/2021	14,082	-	-
01/01/2022	30/12/2022	14,251	-	-

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

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The project activity is the installation of 10 MW solar photovoltaic power plant in Rajkot District in the State of Gujarat. The project activity is implemented by Green Infra Solar Energy Limited (GISEL).

The purpose of the project activity is to generate clean power utilizing solar energy and sell it to Gujarat Urja Vikas Nigam Limited (GUVNL) through a long-term Power Purchase Agreement (PPA). Prior to the implementation of the project activity, electricity would have been generated by the operation of generation-mix of power plants connected to the Indian Grid, which is mainly dominated by thermal/fossil-based power plants.

The project has replaced anthropogenic emission of greenhouse gases (GHG) of 43,046 Tco2e for the current monitoring period from 01/01/2020 to 30/12/2022.

A.2. Location of project

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Host Country: India

State: Gujarat

District: Rajkot

Village: Meravadar

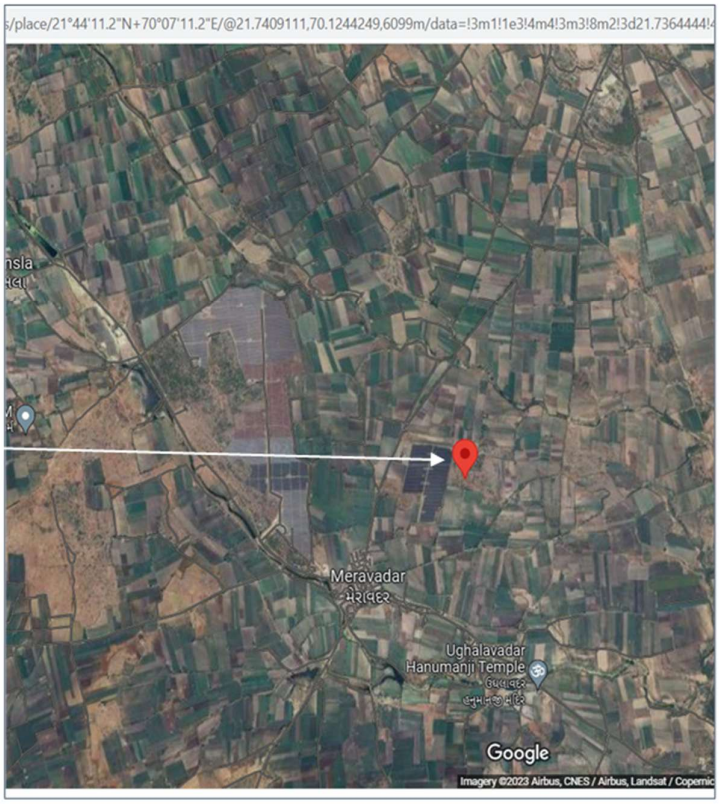
Taluka/Tehsil:Upleta

The geographical location of the power plant:

Latitude	21° 44’ 11.16” N
Longitude	70° 7’ 11.19” E

The physical location of the site is as follows:

10 MW solar power plant – Green Infra Solar Energy Limited



A.3. Reference of applied methodology

>> AMS- I.D. – Grid-connected electricity generation from renewable sources, Version 18.0.[2]

Tools referred with above methodology and applicable for the project activity are:

- Tool to calculate the emission factor for an electricity system[3] – Version 07.0 (EB 100, Annex 04)

A.4. Crediting period of project

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Start date of the crediting period	22/01/2019
End date of the crediting period	30/12/2022
Length of the GS crediting period	1439 days

[2] https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK
[3] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

>>The project activity is the installation of a 10 MW solar photovoltaic (PV) based power plant. The project uses fixed thin film Cadmium Telluride (CdTe) PV modules.

A solar photovoltaic (SPV) system converts solar irradiation in to DC (direct current) electricity and then inverts in to AC (alternating current) power and steps up the voltage levels in transformer such that the energy generated shall be exported to grid with synchronization or to meet the load. The plant has been divided into 8 modular plots, with each plot comprising of 1.25 MWp of solar PV and two 630 Kw inverters. The inverters convert the DC electrical output from the PV modules into AC. The PV modules face southwards and are titled at an angle of 15º from the ground to maximize solar irradiation on the panels.

A summary of the technical details is given below:

Parameter	Value
PV Module	FS – 380
PV module peak power (Wp)	80
Modules per plant	125, 025
Modules per plot	15,600
Strings per plot	1,040
Inverters	SMA SC 630 CP
Inverter power (KvA)	630 KW
Inverter per plot	2
Total plots	8
Total inverters	16
Mounting Structure	Haticon (German Make)

The technical specifications of the PV modules have been mentioned below:

Type	Thin Film Cadmium Telluride (CdTe)
Max. Output at STC (W), Pmax	80
Maximum Power Voltage, Vmpp (Volts)	50.7
Maximum Power Current, Impp (A)	1.58
Open-circuit voltage, VOC (V)	61.7
Short-circuit current, ISC (A)	1.76

Length (mm)	1200
Width (mm)	600
Thickness (mm)	6.8
Weight (kg)	12

The technical specifications of the inverters have been given below:

Inverter	SMA Sunny Central 630CP
Max. DC voltage	1000 V
PV voltage range, MPPT	500-820 V
Max. Input current	1,350
Number of MPP trackers	1
Max. Number of strings (parallel)	9
Nominal AC output	630 KvA
Max. Output current	1271 A
Nominal AC voltage/range	315 V±10 %
AC grid frequency	50 Hz
Max. Efficiency	0.987
Euro ETA	0.985
Normal ambient temperature range	-20°C - +50 °C
Operation temperature range	-20°C - +50 °C
Consumption: operating (Standby)/night	<1500 W/100 W
Warranty	5 years

B.1.1 Forward Action Requests

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There is no forward action requests.

B.2. Post-Design Certification changes

>>

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

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Thera are no deviations regarding the implementation status from registered PDD, Monitoring & Reporting Plan, applied methodology or applied standardized baseline.

B.2.2. Corrections

>>
Not applicable.

B.2.3. Changes to start date of crediting period

>>
Not applicable.

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

>>
Not applicable.

B.2.5. Changes to project design of approved project

>>
Not applicable.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

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The Energy meters (Main and check) have been installed at the transformer yard of the dedicated substation, situated within the project premises. The energy meters are owned and managed by Gujarat Energy Transmission Corporation Limited.

Data Measurement:

Monitoring of power supplied from the project site:

The power supplied from the project activity is monitored using energy meters (main and check) positioned at the Transformer Yard of the dedicated substation situated within the project premises. Joint Meter Reading (JMR) is taken every month by GETCO/ PGVCL officials and site personnel from these Transformer Yard meters. A monthly State Energy Accounting statement is generated by State Load Dispatch Centre (SLDC–-GETCO) and sent to the project proponent. The project proponent raises an invoice on the basis of the statement and submits it to GUVNL. These readings (net export to the grid) from the JMR shall form the basis of estimation of emission reductions in the project activity.

The project activity supplies power to the grid through two feeders. During the meter testing work, it was found out that two ABT meters were faulty and they were replaced by new ones by the representative of PGVCL. The details of the old and new ABT meters are mentioned below in the table:

Meter location	Meter type/make and S. No	Calibration date	Calibration due date
Line-1	Main Meter (old) S. N0- GJ-0952-A	07/03/2019	06/03/2020
	Main Meter(new) S. No- GJ5699A	07/09/2021 and 22/02/2023	06/09/2022 and 21/02/2023
	Check Meter (Old) S. No - GJU62650	10/03/2018	09//03/2019
	Check Meter (new) S. No - GET11849	07/09/2021 and 22/02/2023	06/09/2022/ and 21/02/2023
Line-2	Main Meter (old) S. No-GJ-0953-A	08/09/2021	07/09/2022
	Main Meter (new) S. No- GJ5700A	18/03/2023	17/03/2024

	Check Meter (Old) S. No GJU62651	10/03/2018	09/03/2019
	Check Meter (new) S. No-GET11850	08/09/2021 and 18/03/2023	07/09/2022 and 17/03/2024

Meter replacement during the monitoring period:

During the current monitoring period, the ABT meters installed at Line -1 (Main meter- GJ-0952-A, Check Meter- GJU62650) and Line-2 (Main meter- GJ-0953-A, Check Meter- GJU62651) were replaced as they were found faulty by the representatives of PGVCL. Replacement and calibration of the new Main meter (GJ-5699-A) and Check meter (GET11849) for the Line-1 was done on 07/09/2021 and for Line -2, new Main meter (GJ5700A) and Check meter (GET11850) was done on 08/09/2021. The details of both old and new ABT meters are provided above in the Table.

Calibration delay period and assessment:

There was delay in the calibration due to Covid-19 pandemic. The last calibration of the ABT meters (Main meter and check meter) was done on 07/03/2019 and 10/03/2018 respectively which is valid for one year. The next calibration was to be done at the start of year 2020. The delay in the calibration was due to Covid-19 pandemic as the physical site representation was restricted. Therefore, the next calibration was done on 07/09/2021(Line-1) and 08/09/2021(Line-2).

According to the guidelines of Validation and Verification standard (V1.0), para 9.4.19, 9.4.20 and 9.4.21, para 'f' which describes "Compliance with the calibration frequency requirements for measuring instruments".

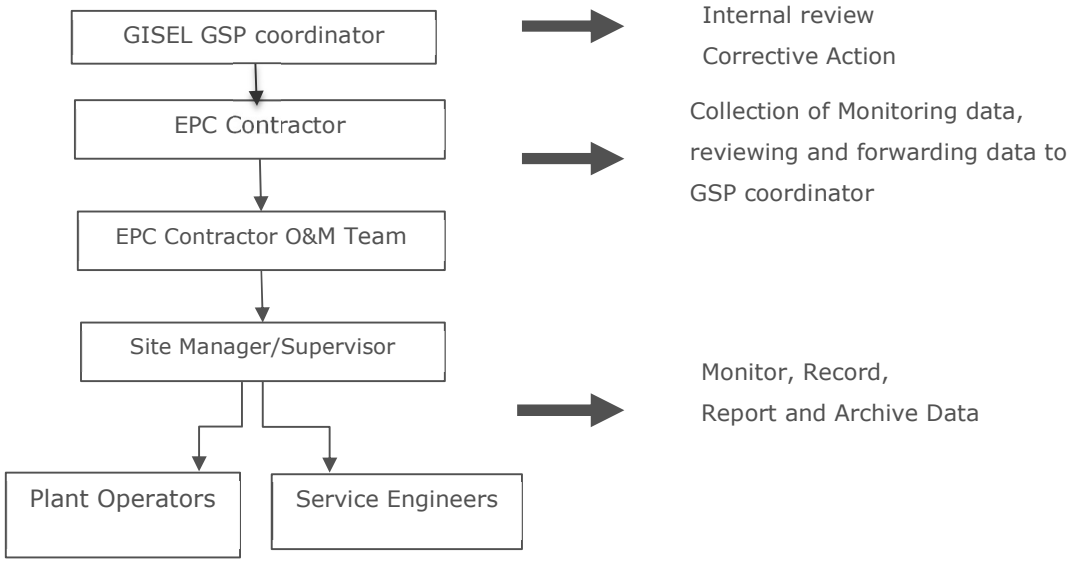
The above standard states that if there is delay in calibration, a conservative approach needs to be followed by the Project Owner to calculate the emission reductions and application of maximum permissible error of the instrument (0.2% for this project activity) is to be considered for the delayed calibration period.

Considering the delay in calibration, we have taken a conservative approach and have applied 0.2% delay throughout the monitoring period, wherein 0.2% has been

subtracted from the export and 0.2% has been added to the import". For the current monitoring period, the error factor of 0.2% has been applied.

The **Monitoring roles and responsibilities**

The operations and maintenance of the project activity has been outsourced to the EPC contractor (Juwi India Renewable Energies Private Limited). The roles and responsibility structure are as follows:



QA/QC procedures:

The energy meters at the feeders are maintained and owned by state electricity board. Neither the project proponent nor the site personnel have any control over it. The records will be cross-checked with the records of sold electricity to state electricity board. The meters are calibrated annually by state electricity board.

Apportioning:

In case of mismatch of date between the start date of the billing cycle and the start date of monitoring period the data will be apportioned in line to the daily generation values and generation ratio for the said mismatch period.

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.

Training and maintenance requirements:

Each and all sites' personnel are provided with proper training to meet the requirements of the operations and maintenance.

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

>>

Data / Parameter	$EG_{grid, OM, y}$
Unit	tCO_2/MWh
Description	Operating Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, version 16, March 2021
Value(s) applied	0.9568
Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 7.0" as 3-year generation weighted average using data for the years 2017-18, 2018-19 & 2019-20. The data are obtained from "CO2 Baseline Database for Indian Power Sector", version 16, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline emissions
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EG_{grid, BM, y}$
Unit	tCO_2/MWh
Description	Build Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, version 16, March 2021
Value(s) applied	0.8682

Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 7.0" as per the latest data for the most recent year 2019-20. The data are obtained from "CO2 Baseline Database for Indian Power Sector", version 16, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline emissions
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EG_{grid, CM, y}$
Unit	tCO_2/MWh
Description	Combined Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, version 14, Dec 2018
Value(s) applied	0.9346
Measurement methodsand procedures	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 emission factor (%) = 75% W_{BM} =Weighting of build margin emissions factor (%) =25%
Purpose of data	For the calculation of the Baseline emissions
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

D.2 Data and parameters monitored

>>

Relevant SDG Indicator	7.2.1 Renewable energy share in the total final energy consumption
Data / Parameter	$EG_{PJ, y}$
Unit	MWh/y(01/01/2020 to 20/02/2022)
Description	Quantity of net electricity generation supplied by the project activity during the year y
Source of data	Monthly joint meter reading reports
Value(s) applied	46,058 Year- wise | MWh

	01/01/2020 – 31/12/2020: 15,743 01/01/2021-31/12/2021: 15,067 01/01/2022- 30/12/2022: 15,248
Measurement methods and procedures	The electricity exported / supplied by the project activity is measured through meters (ABT Meters). It is difference of export and import of project activity.

Meter location	Meter type/make and S. No	Calibration date
Line-1	Main Meter (old) S. N0- GJ-0952-A	07/03/2019
	Main Meter(new) S. No- GJ5699A	07/09/2021 and 22/02/2023
	Check Meter (Old) S. No - GJU62650	10/03/2018
	Check Meter (new) S. No - GET11849	07/09/2021 and 22/02/2023
Line-2	Main Meter (old) S. No-GJ-0953-A	08/09/2021
	Main Meter (new) S. No- GJ5700A	18/03/2023
	Check Meter (Old) S. No GJU62651	10/03/2018
	Check Meter (new) S. No-GET11850	08/09/2021 and 18/03/2023

Monitoring frequency	Continuous measurement & monthly recording
QA/QC procedures	The monthly electricity supplied by the project activity in the JMR report is cross checked with other source of data.
Purpose of data	Calculation of Baseline emissions. To Monitor the SDG 7 Indicator.
Additional comment	Data will be archived in paper & electronic form for two years after the end of crediting period.

elevant SDG Indicator	SDG 13

Data / Parameter	ER_y
Unit	tCO_{2e}/year
Description	Emission reductions achieved in the current monitoring period.
Source of data	As per the estimation in the emission reduction sheet.
Value(s) applied	43,046[4] Year- wise: tCO2e 01/01/2020 – 31/12/2020: 14,713 01/01/2021-31/12/2021: 14,082 01/01/2022- 30/12/2022: 14,251
Measurement methodsand procedures	The baseline emission are the product of electrical baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.
Purpose of data	To monitor the SDG 13 indicator
Additional comment	Data will be archived in paper & electronic form for two years after the end of crediting period.

Relevant SDG Indicator	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
Data / Parameter	Number of employment generation
Unit	Number
Description	Number of people employed directly due to the project activity
Source of data	Plant records or the training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc
Value(s) applied	Total employment generated during the current monitoring

[4] As there was a delay in the calibration of the energy meters, to the value conservative the PP has applied the error factor of 0.2 % for the entire monitoring period.

<table>
<tr><td></td><td>period is 16.

Further, below is the breakup of employment generated:

<table><tr><td>Year</td><td>Skilled</td><td>Unskilled</td></tr><tr><td>01/01/2020 to 30/12/2022</td><td>04</td><td>12</td></tr><tr><td>Total</td><td colspan="2">16</td></tr></table></td></tr>
<tr><td>Measurement methods and procedures</td><td>The total number of persons working in the plant would be calculated based on the daily log available at site.
This parameter also monitors number of men/women employed by the project activity. The project activity ensures that “equal pay for work of equal value” for both men and women and there is no any discrimination against women.
"The employment covers number of men and number of women employed by the project activity. The job is of type temporary/permanent or skilled/unskilled, local/ non-local etc. Also, it is ensured that people will get equal payment for equal work. The payment will be based on work and no any gender inequality for payment for work of equal value”.</td></tr>
<tr><td>Monitoring Frequency</td><td>Monthly monitoring and annual compilation</td></tr>
<tr><td>QA/QC Procedures</td><td>The number of persons employed would be mentioned in the plant register, which can be crossed checked with attendance register.</td></tr>
<tr><td>Purpose of data</td><td>To monitor the SDG 8 indicator</td></tr>
<tr><td>Additional comment</td><td>-</td></tr>
</table>

Relevant SDG Indicator	8.6.1 Proportion of youth (aged 15-24 year) not in education, employment or training.
Data / Parameter	Quality of Employment
Unit	Number
Description	Training of Staff
Source of data	Plant records or the training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc

<table>
<tr><td>Value(s) applied</td><td>
<table>
<tr><th>Year</th><th>No. of trainings</th><th>Date</th></tr>
<tr><td rowspan="3">01/01/2020 to 31/12/2020</td><td>Firefighting, emergency response, drop object</td><td>20/04/2020</td></tr>
<tr><td>Training conducted on incident and accident reporting</td><td>25/05/2020</td></tr>
<tr><td>Training provided on safe handling of machinery and power tools</td><td>22/08/2020</td></tr>
<tr><td rowspan="4">01/01/2021 to 31/12/2021</td><td>Electrical safety training & LOTO Demo via Zoom call</td><td>24/05/2021</td></tr>
<tr><td>PPE Usage & Maintenance</td><td>11/08/2021</td></tr>
<tr><td>Basic Safety while work on 33 KV & 66 KV line</td><td>19/09/2021</td></tr>
<tr><td>Safe usage of power tools</td><td>21/09/2021</td></tr>
<tr><td rowspan="4">01/01/2022 to 30/12/2022</td><td>Disaster management/Emergency Preparedness</td><td>24/02/2022</td></tr>
<tr><td>Fire & Safety Awareness Training</td><td>09/04/2022</td></tr>
<tr><td>Drop Object Prevention & handling of hand tools</td><td>16/08/2022</td></tr>
<tr><td>Basic Safety while work in PSS, USS, 33KV & 220 KV EHV line & feeder</td><td>10/12/2022</td></tr>
</table>
</td></tr>
<tr><td>Measurement methods and procedures</td><td>Together with the technology supplier, the Project organise training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.</td></tr>
<tr><td>Monitoring Frequency</td><td>Annual</td></tr>
<tr><td>QA/QC Procedures</td><td>The training records for all the employees</td></tr>
<tr><td>Purpose of data</td><td>To monitor the SDG 8 indicator</td></tr>
</table>

Additional comment	-

D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter[5]	Value obtained in this monitoring period	Value obtained last monitoring period
Not applicable	Not applicable	Not applicable

D.4. Implementation of sampling plan

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Not applicable.

[5] The project activity is not a community based activity hence it is not applicable.

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

>>

SDG 7 Affordable and Clean Energy:

The monitoring parameter for the SDG 7 is quantum of net electricity supplied to the grid during the year y. Since in the baseline condition no renewable electricity would have been and generated and supplied to grid from the project location. Hence, the baseline value is zero.

Vintage	Baseline Value Quantity of net electricity supplied to the grid (MWh)
01/01/2020 to 31/12/2020	0
01/01/2021 to 31/12/2021	0
01/01/2022 to 30/12/2022	0
Total	0

SDG 8: Decent Work and Economic Growth

The monitoring parameter for the SDG 8 is number of employments generated in the project. Since baseline and pre-project scenario are same, in the baseline condition these values are zero.

Vintage	Baseline Value Number of employments generated Number of trainings
01/01/2020 to 31/12/2020	0
01/01/2021 to 31/12/2021	0
01/01/2022 to 30/12/2022	0

Total	0

SDG 13 Climate Actions

The monitoring parameter for the SDG 13 is GHG emission reduction achieved by the project during the current monitoring period. Baseline Emissions for the amount of electricity supplied by project activity,

BE_y is calculated as

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

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 CDM 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" (tCO_2/MWh).

For this monitoring period, the emission reduction is calculated as below:

The Net export is calculated as the difference between energy exported to grid and energy imported by the project activity. The monthly reported export & import values as per JMR (Joint Meter Reading) and it is cross checked from the invoices raised by the PP.

Vintage	Net Generation (MWh)	Grid emission factor (tCO_2/MWh)	Baseline emission (tCO_2)
01/01/2020 to 30/12/2020	15,743	0.9346	14,713
01/01/2021 to 31/12/2021	15,067	0.9346	14,082
01/01/2022 to 30/12/2022	15,248	0.9346	14,251
Total	46,058		43,046

E.2. Calculation of project value or estimation of project situation of each SDG Impact

>>

SDG 7 Affordable and Clean Energy:

The monitoring parameter for the SDG 7 is quantity of net electricity supplied to the grid during the year y. In the project situation, the project supplied 46,058 MWh electricity during the monitoring period. This can be cross checked from JMR and Invoices.

Vintage	Project Value Quantity of net electricity supplied to the grid (MWh)
01/01/2020 to 31/12/2020	15,743
01/01/2021 to 31/12/2021	15,067
01/01/2022 to 30/12/2022	15,248
Total	46,058

SDG 8: Decent work and Economic growth

The monitoring parameter for the SDG 8 are Number of employments generated by the project during the monitoring period. The number of employments generated and the trainings conducted during the project scenario is mentioned in the below table:

Vintage	Project Value Number of employments generated	Number of trainings
01/01/2020 to 30/12/2022	16	12
Total	**16**	12

SDG 13 Climate Actions

As mentioned in the PDD, the project activity involves generation of electricity from the solar power plant. Hence, as per the AMS I.D, version 18.0, project emissions for renewable energy project activities is considered zero.

Vintage	Project Emissions tCO_2
01/01/2020 to 31/12/2020	0
01/01/2021 to 31/12/2021	0
01/01/2022 to 30/12/2022	0
Total	0

E.3. Calculation of leakage

>>As per the PDD, no source of leakage emissions identified under the proposed project activity.

Hence $LE_y = 0$.

Vintage	Leakage Emissions tCO_2
01/01/2020 to 30/12/2020	0
01/01/2021 to 31/12/2021	0
01/01/2022 to 30/12/2022	0
Total	0

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
7	Affordable Clean Energy Renewable energy generated (MWh)	0	46,058	46,058
8	Decent Work and Economic growth			

	Employment Generated (Nos)	0	16	16
	Number of trainings	0	12	12
13	Climate Action Emission Reductions (tCO_{2e})	43,046	0	43,046

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values[6] achieved during this monitoring period
7	52,578 MWh	46,058 MWh
8	10 3 training	16 12 trainings
13	49,137 tCO_{2e}	43,046 tCO_{2e}

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

>>

In PDD, the estimated value provided for one year (ie, 365 days). Hence, the estimated value applicable during this monitoring period (1095 days) is apportioned based on the number of days in the current monitoring period.

SDG Goal	SDG-7	SDG-8		SDG-13
SDG Impact	Renewable electricity Generated (MWh)	Employment Generated (Nos)	Training Provided to O&M staffs (Nos)	Emission Reduction Achieved (tCO_2
Estimation as per PDD (for 1 year).	17,526	10	1	16,379

[6] Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

Number of days in the current monitoring period	1095	1095	1095	1095
Estimated for the current monitoring period	52,578	10	3	49,137
Actual for the current monitoring period	46,058	16	12	43,046

SDG 7: Affordable and Clean Energy

As per the registered PDD, the annual estimated power generation for the project activity is 17,526 MWh, thus considering number of days covered in the current monitoring period to be 1095 days, the estimated power generation is 52,578 MWh.

SDG 8 : Decent Work and Economic Growth

The project leads to employment opportunities which was not possible in the baseline scenario. The project provides employment to 16 persons in the current monitoring period.

Also, the project activity improves the quality of employment by giving training to employee. Thus minimum 1 training per year was assumed by the project activity. During the current monitoring period, total 12 trainings were provided to the employees.

SDG 13 Climate Action

The annual estimated emission reduction for the project activity is 16,379 tCO_{2e}, thus considering number of days covered in the current monitoring period to be 1095, the estimated emission reduction contributing towards SDG 13 is 49,137 tCO_{2e}.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

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SDG 7:

As per the registered PDD, the estimated net electricity generated would have been 52,578 MWh, and the actual net generated for the current monitoring period is 46,058 MWh. Therefore, there is a decrease of approximately 12% in the generation of electricity as per the estimated value in the PDD. The generation of electricity depends on the climatic conditions and the availability of sunlight is not within the control of the Project developer.

SDG 8:

As per the registered PDD, the estimated trainings per year to the employees was 1. However, during the current monitoring period, many different trainings like emergency preparedness, road and fire safety and electrical safety training were conducted for the employees to increase awareness and quality of work. Total 12 trainings were provided to the employees. The project has also generated more employment during this monitoring period than as committed in the PDD. The employment has increased due to the increased compliance level and better O&M practices.

SDG 13: The emission reductions as per the registered PDD for the current monitoring period is estimated to be 49,137 tCO_{2e} whereas during the current monitoring period the emission reductions claimed are 43,046 tCO_{2e} which is approximately 12.40% lower than the estimated emission reductions for the same monitoring period. The reductions in actual emission reduction are justified, as the net electricity generated from July to September is low due to the monsoon season which is beyond the control of the project participant.

SECTION F. SAFEGUARDS REPORTING

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Not applicable.

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

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For continuous Input and Grievance expression process, a grievance register is placed at the site for the local stakeholders. Global stakeholders can log their grievances through the link

https://www.sembcorpenergyindia.com/Home/ContactUs.
A dedicated committee is formulated to handle the grievances at top priority.

However, no input or grievances received from any stakeholder during the current monitoring period.

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

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Not applicable.

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

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No legal contest or dispute arisen with the project during the monitoring period.

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption