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**

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KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS7572[1]
Title of the project (s) covered by monitoring report	120 MW Solar PV Plant by Juniper Green Sigma Private Ltd. in Gujarat
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	06
Version number of the monitoring report	064
Completion date of the monitoring report	2206/075/2025
Date of project design certification	09/11/2020
Date of Last Annual Report	23/01/2025
Monitoring period number	8th
Duration of this monitoring period	01/07/2024 to 31/12/2024 (Inclusive of both the dates)
Project Representative	Infinite Environmental Solutions 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	ACM0002 "Grid-connected electricity generation from renewable sources" Version 20.0[2]
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

[1] https://registry.goldstandard.org/projects/details/2153
[2] https://cdm.unfccc.int/UserManagement/FileStorage/AG07ZJQ3EXD42LT5YV9HR16M8KINPO

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 7: Affordable and Clean Energy	MWh of renewable energy generated	124,498.63	MWh
SDG 8: Decent Work and Economic Growth	Trainings	8 Trainings	No of Trainings
	Employees	22[3] employees	No of Employees
	Income generation	INR 5,238,725	Income (INR) Generation
SDG 13: Climate Action (mandatory)	Take urgent action to combat climate change and its impact	118,300~~(117,265)~~tCO_2e[4]	GS VERs

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Table 2 – Product Vintages

		Amount Achieved
Start Dates	**End Dates**	**SDG 13: Climate Action (GS VERs)**
01/07/2024	31/12/2024	118,300~~(117,265)~~tCO_2e[5]

[3] 4 new employees were hired in the current monitoring period

[4] #Actual ER achieved during current MP is 117,265 tCO2e but The quantity of Emission Reductions (ERs) that was previously capped during the Monitoring Period (01/01/2024 to 30/06/2024) is now being carried forward and proposed to be claimed as part of the current Monitoring Period (01/07/2024 to 31/12/2024). These ERs were generated and verified during the previous MP but could not be issued at that time, and hence are now included in the current ER claim submission. ~~Claimed for Current Monitoring Period 118,300 tCO2e~~. The calculation has been clearly detailed in the Excel sheet.

[5] #Actual ER achieved during current MP is 117,265 tCO2e but The quantity of Emission Reductions (ERs) that was previously capped during the Monitoring Period (01/01/2024 to 30/06/2024) is now being carried forward and proposed to be claimed as part of the current Monitoring Period (01/07/2024 to 31/12/2024). These ERs were generated and verified during the previous MP but could not be issued at that time, and hence are now included in the current ER claim submission. Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.~~#Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.~~

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The main purpose of the project activity is to generate electrical energy through sustainable means using solar power resources, the generated green electricity contributes to climate change mitigation efforts. This project activity is a large-scale solar project. Juniper Green Sigma Private Limited is the project owner for this project activity. The project replaces anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 275,350 tCO_2e per annum, thereon displacing 292,335 MWh/year amount of electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/ fossil fuel-based power plant. The estimated emission reduction during the current monitoring period is 138,806tCO_2e displacing 147,368.88MWh, and the actual emissions reductions are achieved as (117,265)[6]tCO_2e thereon displacing 124,498.63 MWh amount electricity.

The project activity is the installation of a new grid-connected renewable power plant/unit and this is not a CPA that has been excluded from a registered CDM PoA as a result of erroneous inclusion of CPAs. The project activity is not registered with any other compliance or voluntary market-based mechanism such as Clean Development Mechanism (CDM)[7], Voluntary Carbon Standard (VCS)[8], Global Carbon Council (GCC)[9], I-REC[10] and Indian REC[11] or any other mechanism. The GHG emissions reductions from the project activity are not accounted for within the relevant system of the host country/regional regulator. The VERs for the same vintage will not be claimed in another standard other than GS and there is no double accounting with national climate policies or programs. Also, self-declaration for no double counting has been provided by the Project Developer.

The details of the project are mentioned in the table:

Project Investors' Name	Capacity in MW_{AC}	State
Juniper Green Sigma Private Limited	120 MW	Gujarat, India

[6] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.
[7] https://cdm.unfccc.int/Projects/projsearch.html
[8] https://registry.verra.org/app/search/VCS
[9] https://projects.globalcarboncouncil.com/
[10] https://www.ecohz.com/i-recs
[11] https://www.recregistryindia.nic.in/index.php/publics/registered_regens

Project activity is being implemented by Juniper Green Sigma Private Limited and represented by Infinite Environmental Solutions Limited.

Scenario existing prior to the implementation of the project activity:

As the project activity is the installation of a new grid-connected renewable power plant/unit. The scenario existing prior to the implementation of project activity is Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool 7: Tool to calculate the emission factor for an electricity system" (Version 7.0, EB 100 annex 4) [12].

Baseline Scenario

Baseline scenario and Scenario existing prior to the implementation of the project activity are both same.

Sustainable Development

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

- **Social well being**

The project activity provides job opportunity to local people during erection, commissioning and maintenance of the Solar power project. Frequency of visiting to villages and nearby areas by skilled, technical and industrialist has increased due to installation /site visit/operation and maintenance work related to the project at plant site. This directly and indirectly positively effects the economy of nearby populace.

- **Environmental well being**

[12] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf

Solar power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus, the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

- **Economic well being**

The project activity generates permanent and temporary employment opportunity within the vicinity of the project. The electricity supply in the nearby area improves which directly and indirectly improves the economy and life style of the area.

- **Technological well being**

The project activity is step forward in harnessing the untapped solar potential and further diffusion of the solar technology in the region. The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.

The present monitoring period is from 01/07/2024 to 31/12/2024 through which emission reduction claimed is (117,265)[13] tCO_2e.
The Emission Reductions as per the vintage break-up (2024) in the current monitoring in the following format:
01/07/2024 to 31/12/2024: (117,265)[14] tCO_2e.

A.2. Location of project

The project activity is located in India at Sabarkantha, Banas kantha and Aravali district in Gujarat. The project activity exports the generated energy to grid which is interconnected to the unified Indian grid through a 66 kV Single circuit transmission line up to the nearest grid substation located at Khadol, Babsar and Bhordu respectively in Gujarat. The geographical coordinates of the project site have been provided below:

S. No	Location	From		To	
		Latitude	Longitude	Latitude	Longitude

[13] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.
[14] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

1.	Village - Babsar, Tal - Vadali, Dist. - Sabarkantha	23°58'32.67"N	72°54'26.79"E	23°58'35.60"N	72°54'41.21"E
2.	Village - Bhordu, Tal - Tharad, Dist.- Banaskantha	24°25'33.88"N	71°44'21.61"E	24°25'36.10"N	71°44'07.59"E
3.	Village - Bilvaniya, Vantda Suka, Tal– Dhansura, Dist. -Aravalli	23°19'36.21"N	73°17'00.03"E	23°19'27.63"N	73°16'52.46"E

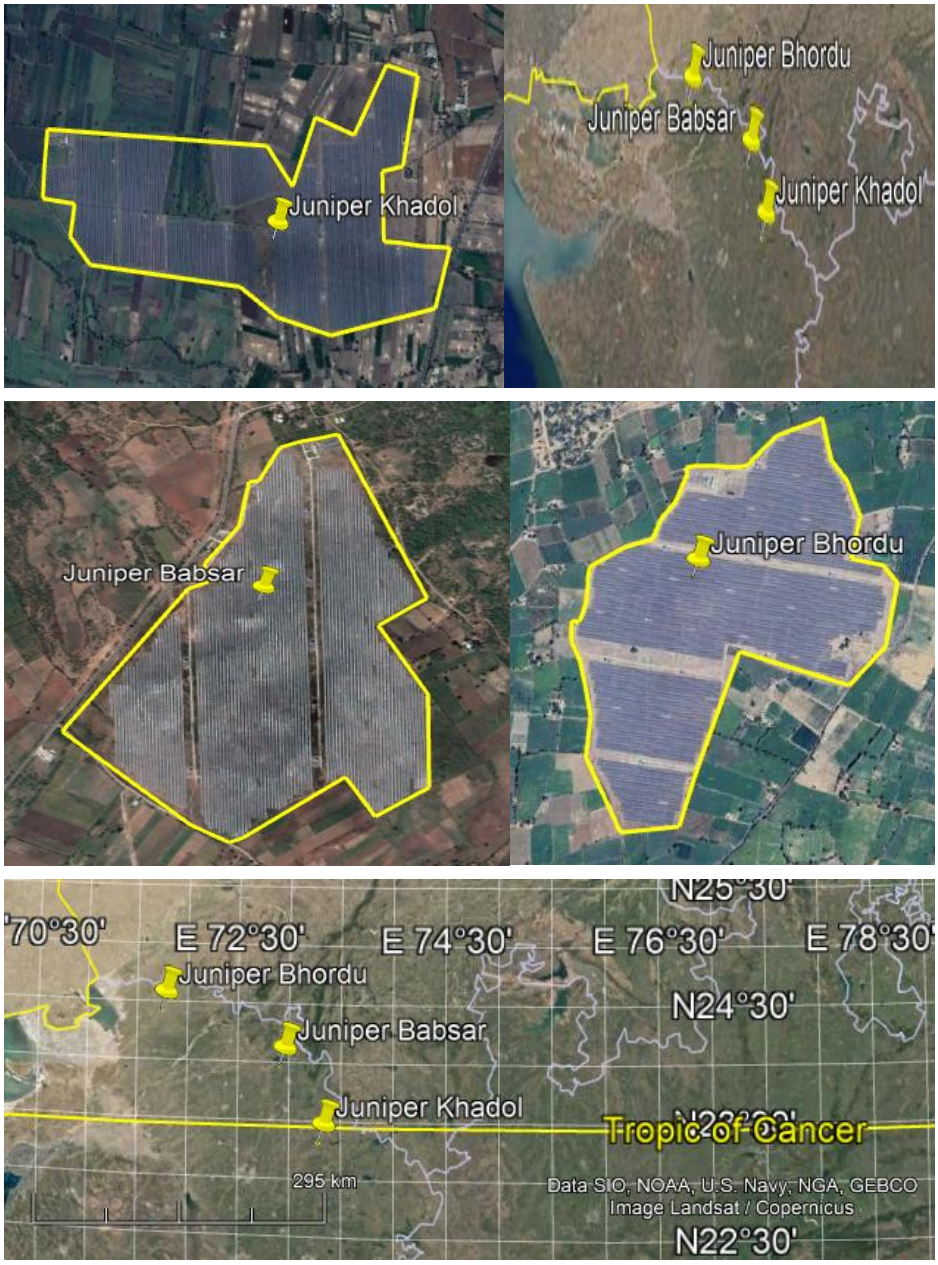

Juniper Khadol
Juniper Bhordu
Juniper Babsar
Juniper Khadol
Juniper Babsar
Juniper Bhordu
70°30'
E 72°30'
E 74°30'
E 76°30'
E 78°30'
N25°30'
N24°30'
Juniper Bhordu
Juniper Babsar
Juniper Khadol
Tropic of Cancer
295 km
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
N22°30'



Figure 1 Map & Images showing locations of Project

A.3. Reference of applied methodology

Title: Large Scale Consolidated Methodology to describe baseline and monitoring methodology for ACM0002 "Grid-connected electricity generation from renewable sources"

References: Approved Large-Scale Consolidated Methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 20)[15]

Tools:

Tool for the demonstration and assessment of additionality (Tool 1)- Version 7.0 (EB 70, Annex 08)[16]

Tool to calculate the emission factor for an electricity system (Tool 7)- Version 7.0 (EB 100, Annex 04)[17]

A.4. Crediting period of project

Type of crediting period: Renewable

[15] AG07ZJQ3EXD42LT5YV9HR16M8KINPO (unfccc.int)
[16] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[17] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf

Start date of crediting period: 09/11/2020[18]
End date of crediting period: 08/11/2025
Length of 1st crediting period: 5 years (Renewable Crediting Period i.e., it will be renewed twice maximum up to 15 years i.e., 5yrs+5yrs+5yr)
Monitoring period: 01/07/2024 – 31/12/2024 (both dates included)
Length of the monitoring period: 184 days

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The project activity involves installation of 120 MW_{AC} grid connected solar photovoltaic power plant. The start date of the project activity is 04/03/2020, i.e., the date of the earliest Purchase Order and 25 MW, Bilvaniya, Vantda Suka, Tal–Dhansura, Dist.-Aravalli site Commissioned earlier on 17/10/2020, therefore 17/10/2020 is commercial operation date. There were no major breakdowns occurred in the current monitoring period. Moreover, the total maintenance and downtime for the current monitoring period is mentioned in appendix 3. The PV system mainly consists of PV modules, module mounting structures, inverters, regulators, monitoring devices etc. electrical characteristics of the project are as below:

- 3-phase alternating current
- Nominal frequency is 50 Hz
- Final Voltage at Delivery Point is 66kV.

Site	Final Delivery Points	Final Voltage
Babsar	66 kV Babsar S/s	66 kV
Bhordu	66 kV Bhordu S/s	66 kV
Khadol	66 kV Khadol S/s	66 kV

The project activity is expected to operate at a plant load factor of 28.36% exporting 292,335 MWh of electrical energy per year to the Unified Indian grid. This results in average annual reduction of 275,350 tCO_2e per annum from the project activity. The project activity does not involve any technology transfer.
The commissioning dates for the project activity is given below:

[18] The Crediting Period has been considered from the date of Design Certification of the project. The same can be referred by the registered PDD version 6.0 dated 11/01/2021

S.No.	Organization name	Location	Capacity (AC)	Date of Commissioning
1	Juniper Green Sigma Private Limited	Village Bilvaniya, Vantda Suka, Tal. - Dhansura, Dist.-Aravali	25 MW	17/10/2020
2		Village Babsar, Tal-Vadali, Dist. -Sabarkantha	25 MW	19/10/2020
3			10 MW	28/11/2020
4		Village Bilvaniya, Vantda Suka, Tal–Dhansura, Dist. - Aravalli	20 MW	28/11/2020
5		Village-Bhordu, Tal-Tharad, Dist.- Banas kantha	25 MW	09/12/2020
6			15 MW	17/12/2020

The technical specifications are given below:

For Village Bilvaniya, Vantda Suka, Tal. - Dhansura, Dist.-Aravali

Capacity	25 MW (AC) / 36.247 MW (DC)
SPV Modules – Type/make	Monocrystalline / Trina Solar
No. of Photovoltaic Modules / Rating	72,492 / 405 Wp, 16,800 / 410 Wp
Inverters – Type/make	String/Sungrow
No. of Inverter / Rating	125 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4608 - A
Name of Substation	66 kV GETCO Substation, Khadol

For Village Babsar, Tal-Vadali, Dist. -Sabarkantha

Capacity	25 MW (AC) / 36.41 MW (DC)
SPV Modules – Type/make	Monocrystalline / JA Solar & Trina Solar
No. of Photovoltaic Modules / Rating	52,192 / 405 Wp, 19,656 / 410 Wp & 3,640/ 405 Wp, 14,000 / 410 Wp
Inverters – Type/make	String/Sungrow
No. of Inverter / Rating	125 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4585 - A
Name of Substation	66 kV GETCO Substation, Babsar

For Village Babsar, Tal-Vadali, Dist. -Sabarkantha

Capacity	10 MW (AC) / 14.696 MW (DC)
SPV Modules – Type/make	Mono PERC / JA Solar & Trina Solar
No. of Photovoltaic Modules / Rating	36,288 / 405 Wp
Inverters – Type/make	String/ Sungrow
No. of Inverter / Rating	50 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4585 - A
Name of Substation	66 kV GETCO Substation, Babsar

For Village Bilvaniya, Vantda Suka, Tal–Dhansura, Dist. - Aravalli

Capacity	20 MW (AC) / 29.459 MW (DC)
SPV Modules – Type/make	Mono PERC / Trina Solar
No. of Photovoltaic Modules / Rating	50,064 / 405 Wp, 22,400 / 410 Wp
Inverters – Type/make	String/ Sungrow
No. of Inverter / Rating	100 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4608 - A
Name of Substation	66 kV GETCO Substation, Khadol

For Village-Bhordu, Tal-Tharad, Dist.- Banas kantha

Capacity	25 MW (AC) / 36.541 MW (DC)
SPV Modules – Type/make	Mono PERC / JA Solar
No. of Photovoltaic Modules / Rating	71,092 / 405 Wp, 18,900 / 410 Wp
Inverters – Type/make	String/ Sungrow
No. of Inverter / Rating	125 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4605 - A
Name of Substation	66 kV GETCO Substation, Bhordu

For Village-Bhordu, Tal-Tharad, Dist.- Banas kantha

Capacity	15 MW (AC) / 21.86 MW (DC)
SPV Modules – Type/make	Mono PERC / JA Solar
No. of Photovoltaic Modules / Rating	36,260 / 405 Wp, 17,500 / 410 Wp
Inverters – Type/make	String/ Sungrow
No. of Inverter / Rating	75 /200 KW
ABT Meter – Make / Serial No.	Secure / GJ-4605 - A
Name of Substation	66 kV GETCO Substation, Bhordu

B.1.1 Forward Action Requests

FAR 01:

In all instances of monitoring VVB to check for Higher EX-Post Emission Reductions in line with section 2.1.3 and 2.1.4 of "RC 2022 (Assessment Approach For Reporting Higher Ex-Post Emission Reductions" dated 04/07/2022.~~No FARs envisaged during previous performance review.~~

Response: The actual achieved emission reductions for this monitoring period are 15.52% lower than the estimated value outlined in the Project Design Document (PDD) for the same period. Similarly, for the calendar year, the reduction is 2.61% lower than the registered PDD estimate. The primary factor contributing to this decline in emission reductions is the lower Plant Load Factor (PLF). According to the PDD, the estimated PLF was 28.36%. However, during the current monitoring period, the actual PLF achieved was 23.49%, while for the calendar year, it stood at 27.08%.These values remain within the acceptable benchmark limits and the calculation is also mentioned in the ER sheet.

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B.2. Post-Design Certification changes

Not applicable.

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

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

B.2.2. Corrections

There are no Corrections in current monitoring period but there is one correction in Second6tt last monitoring period. The correction is the estimated value of Parameter $EG_{facility,y}$ i.e. Quantity of net electricity supplied to the grid reported under SDG 7 in section B.7.1 of the registered GS PDD version 6.0 dated 11/01/2021 was mistakenly considered without using the degradation factor (0.70%). However, the baseline emission (BE_y) was calculated using the degradation factor, but the same has been reported erroneously (typographical error). The correct value of ER estimation can be referred from the ER sheet approved at the time of design certification.

PD is requested corrections during the previous MP to revise the estimated value Parameter $EG_{facility, y}$ and parameter BE_y. The calculation table for the same has also been updated in line with the ER sheet. Please note that the correction is only related to reporting the parameters in the PDD and it does not affect the additionality, applicability of methodology and registered monitoring plan of the project as the correct values were reported in the IRR and ER sheet at the time of Design Certification.

The correct value of parameter $EG_{facility,y}$ and BE_y along with the calculation are represented below:

SDG 7: Affordable and Clean Energy:

Year	Baseline Estimate	Project Estimate	Net Benefit
Year 1	0	298,120	298,120
Year 2	0	293,961	293,961
Year 3	0	291,903	291,903
Year 4	0	289,860	289,860
Year 5	0	287,831	287,831
Total	0	1,461,675	1,461,675
Total number of crediting years	5 Years		
Annual average over the crediting period	0	292,335	292,335

SDG 13: Climate Action

Year	Baseline Estimate	Project Estimate	Net Benefit
Year 1	280,799	0	280,799
Year 2	276,881	0	276,881
Year 3	274,943	0	274,943
Year 4	273,019	0	273,019
Year 5	271,108	0	271,108
Total	1,376,750	0	1,376,750
Total number of crediting years	5 Years		
Annual average over the crediting period	275,350	0	275,350

B.2.3. Changes to start date of crediting period

There is no change of start date of crediting period.

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

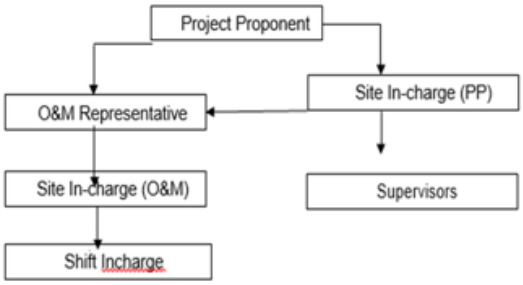
Monitoring plan is already included in the registered PDD. No change from registered monitoring plan, applied methodology or applied standardized baseline.

B.2.5. Changes to project design of approved project

There is no change to project design of approved project.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The monitoring plan is developed in accordance with the modalities and procedures for GS4GG project activity and is proposed for grid-connected solar power projects being implemented in Gujarat, India. The monitoring plan, describes about the monitoring organization, 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 PD. The team comprises of the following members:



Responsibilities of Site In charge (PD): Overall functioning and maintenance of the project activity, the Site in charge coordinates with the In-house O&M operator as well as the site supervisors. Also, site in charge is responsible for GHG emission calculation, Meter Calibration and Invoicing.

Responsibilities of O&M Representative: Co-ordination between Site in-charge of the O&M operator as well as the project developer (PD) and further report to PD head office.

Responsibilities of Site In-charge (O&M Operator): Responsibility for maintaining the data records, ensures completeness of data, and reliability of data (calibration of equipment) as well as data recording for all the parameters.

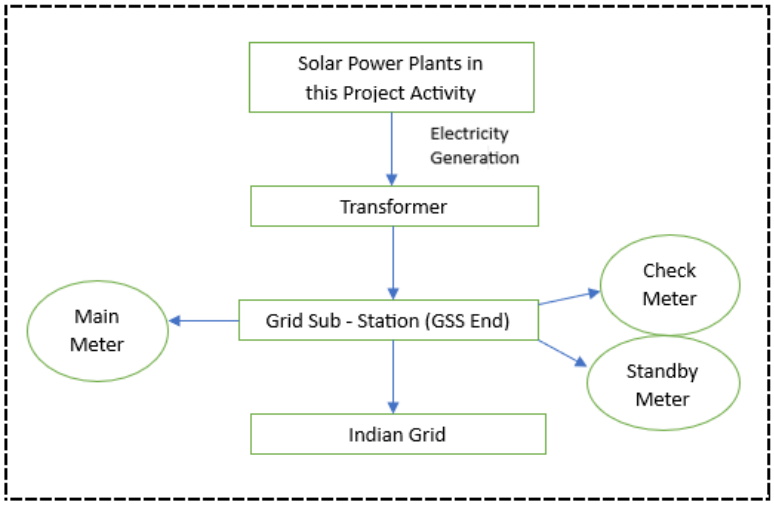
Responsibilities of Shift In-charge: Responsibility for day-to-day data collection and maintains day to day monitored data such as meter readings, Trainings etc.

Data archiving policy: All monitored data is archived electronically for a period of two years after the end of the crediting period or the last issuance of GSVERs, whichever occurs later.

Data Measurement: The export and import energy are measured continuously using above mentioned Main & Check meters installed at GETCO (Gujarat Energy Transmission Corporation Ltd.) Sub-station located at following locations: -

Capacity (MW_{AC})	Substation	Location
45 MW	66kV Khadol S/s	Village - Gadh Akot, Bilvaniya and Vantda Suka, Tehsil – Dhansura, Dist.- Aravali
35 MW	66kV Babsar S/s	Village - Babsar, Tehsil – Vadali, Dist.- Sabar kantha
40 MW	66kV Bhordu S/s	Village - Bhordu, Tehsil – Tharad, Dist.- Banas kantha

A simplified SLD of the monitoring system including the location of energy meters and the project is located various villages of Aravali, Sabar kantha and Banas kantha districts in Gujarat state of India. The substation details are mentioned above. There are 3 sites in total and each site has three meters one main meter, one check meter and one standby meter i.e., 6 meters in total and the meters are located at GETCO (Gujarat Energy transmission Corporation Ltd.) Sub-station (GSS) located at following locations as mentioned in the above table and the same has been demonstrated in the below diagram. The location of the energy meters along with serial number is mentioned in appendix 1 of the MR. The given SLD is same for all the 3 sites, and it compromises of 120 MW capacity in total.



Export & Import readings of Main & Check meters shall be taken on monthly basis by authorized officer of SEB (Gujarat Urja Vikas Nigam Limited) in the presence of PD or representative of PD. The meter reading is being taken jointly and signed by the representatives of the SEB and PD or representative of PD. Based on the readings, invoices/ monthly bills will be raised by PD or representative of PD. These invoices/ monthly bills can be used for cross checking the meter readings taken for the respective project activity. All the meters used in the project activity are calculated once every 3 years by an independent testing laboratory[19]. GUVNL is responsible for maintaining the QA/QC procedures (accuracy class and calibration frequency) GUVNL/Discom officer are fully responsible for the maintenance of the meters.

It is to be noted though Project owner or their representatives are available during meter reading, the calculations of net electricity supplied to grid are completely under purview of GUVNL (Gujarat Urja Vikas Nigam Limited) and Project owner do not have any control on it. Project owner gets the monthly credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations. Emission reduction is calculated by multiplying net electricity generation ($EG_{PJ, y}$) with combined margin grid emission factor ($EF_{CM, Y}$).

Data collection and archiving: Export & Import readings from main & check meter are collected under the supervision of the O & M Team or authorized representatives of

[19] Hi-tech Laboratory authorized by UGVCL (Uttar Gujarat Vij Company Ltd.)

PD. Export and Import data would be recorded and stored in electronic &/or Paper. The records are checked periodically by the Head (Operations) and discussed thoroughly with the O & M Team. The period of storage of the monitored data will be 2 years after the end of crediting period or till the last issuance of GSVERs for the project activity whichever occurs later.

Mismatch in Monitoring Period and the 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 from:

D = (A/B) *C

Where;

A = Difference of number of days which do not match the 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.

Emergency preparedness: The project activity does 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 unlikely event of failure of Main meter and Check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible. In the event that the Main meter is not in service as a result of maintenance, repairs or testing, the Check meter will be used for readings and in the event that the Main meter and check meter both are not in service as a result of maintenance, repairs or testing, the Standby meter will be used for readings. During the monitoring period the main, check and standby meters were operating in the acceptable limits of accuracy at site.

The net electricity is calculated from the difference between export and import, which is used for baseline emission calculations, and the export and import readings are taken from the energy meters which are required to be calibrated as per the calibration frequency. If the calibration is delayed, the error factor will be applied as per the accuracy class of the energy meter for the delayed period at the time of verification.

The plant underwent scheduled maintenance and downtime during the current monitoring period and the details are mentioned in Appendix 3.

Personnel training[20]: In order to ensure proper functioning of the project activity and a proper monitoring of emission reductions, the staff has been trained. The plant helpers are trained in equipment operation, data recording, reports writing, operation and emergency procedures in compliance with the monitoring plan. The training sessions have been provided in this monitoring period[21] has been mentioned under the Appendix 02.

SECTION D. DATA AND PARAMETERS

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

Relevant SDG Indicator 13: Take urgent action to combat climate change and its impacts

Data/parameter	$EF_{grid,OM,y}$
Unit	tCO_2e/MWh
Description	Operating Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, Version 15.0[22]
Value(s) applied	0.9622
Choice of data or Measurement methods and procedures	The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 15.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	The data is used to calculate baseline emission reductions
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Data/parameter	$EF_{grid,BM,y}$
Unit	tCO_2e/MWh
Description	Build Margin CO_2 emission factor in year y

[20] For More details pls refer Appendix 02.
[21] For more details refer section D of the MR.
[22] https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver15.pdf

Source of data	Calculated from CEA database, Version 15.0
Value(s) applied	0.8811
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system. The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 15.0[23], published by the Central Electricity Authority, Ministry of Power, and Government of India.
Purpose of data	The data is used to calculate baseline emission reductions
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Data/parameter	$EF_{grid,CM,y}$
Unit	tCO_2e/MWh
Description	Combined Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, Version 15[24]
Value(s) applied	0.9419
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system", The data is obtained from "CO_2 Baseline Database for Indian Power Sector" version 15.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline Emission
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

D.2 Data and parameters monitored
Relevant SDG Indicator 7.2: Affordable and Clean Energy

Data / Parameter	$EG_{facility,y}$
Unit	MWh
Description	Quantity of net electricity supplied by the project plant/unit to the grid in year y (MWh)

[23] https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver15.pdf
[24] https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver15.pdf

Measured/calculated/ default	Method: The Net electricity supplied to the grid by the project activity will be calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly Meter reading reports provided by SEB as per below equation: $EG_{facility,\ y} = EG_{Export} - EG_{import}$
Source of data	Statement of net export of power to the grid at the plant site
Value(s) of monitoring parameter	124,498.63 MWh Vintage date: (01/07/2024 to 31/12/2024) (inclusive of both dates)
Monitoring equipment	Energy Meters are used for monitoring. Refer to Appendix 1 for Calibration details.
Measuring/reading / recording frequency:	Monthly
Calculation method (if applicable)	The net energy exported to the grid is measured every month using a calibrated energy meter by the State Electricity Board authorities in the presence of the project implementer. The meter/s are jointly inspected and sealed by authorized representatives of the company and the state utility. Measuring procedure: Measured by an export-import energy meter. The net electricity exported by the project plant is calculated by deducting the amount of imported electricity from the total amount of exported electricity. Accuracy class of energy meter: 0.2s Entity responsible: Juniper Green Sigma Private Ltd.
QA/QC procedures	The meters are calibrated once every 3 years by an independent testing laboratory. Calibration records are maintained at the plant. Export & Import readings of Main & Check meters shall be taken on monthly basis by authorized officer of SEB (Gujarat Urja Vikas Nigam Limited) in the presence of PD or representative of PD. The meter reading is being taken jointly and signed by the representatives of the SEB and PD or representative of PD. Based on the readings, invoices/ monthly bills are raised by PD or representative of PD. These invoices/ monthly bills are used for cross checking the meter readings taken for the respective project activity. It is to be noted that the meter in question is in control and supervision of GUVNL and are calibrated only as and when GUVNL so desires. The metering system comprises of the main, check and standby meter. In the event that the main metering

	system is not in service due to maintenance, repair or testing, the reading is obtained from the check meter. In the event that the Main meter and check meter both are not in service as a result of maintenance, repairs or testing, the Standby meter will be used for readings.
Purpose of data	The Data/Parameter is required to calculate the baseline emission
Additional comment	Data is archived electronically for a period of 2 years beyond the end of crediting period.

Relevant SDG Indicator SDG 8.5.1: Decent Work and Economic Growth

Data / Parameter	• Quantitative employment, • Quality of employment • Income generation
Unit	• Number (Trainings) • Number (employees) • INR (salary)
Description	• Number of Trainings provided to employees & O&M staff • Number of project employees with Number of male/female, permanent/temporary, age and person with disabilities. • Salary given to the employees of the project. The income to all the unskilled workers is made on day-to-day basis in line with the minimum wage requirements. Annual records of income paid to all the employees are available. Total 22 employees are working in the current monitoring period Skilled – 22 (Permanent) Unskilled - 00 (temporary) Male-22 Female-00[25]
Measured/calculated/ default	Measured
Source of data	• Training Records (HSE & HR) • Salary Slip of the project employees.

[25] The project owner adheres with No discrimination policy. But due to the remoteness of site females do not prefer to work here. Female employees are employed in the head office.

Value(s) of monitored parameter	Training Provided – 8 (For more detailed project site wise trainings please refer appendix 2 of MR). No. of employees – 22 Income generation (Total income generated for the employees) – 5,238,725 INR
Monitoring equipment	• Training Attendance sheets and records • Employment Records • Salary slips of the employees
Measuring/reading / recording frequency:	Once in a Monitoring period
Calculation method (if applicable)	• Training Attendance sheets. • Employee Records • Salary slips of the employees
QA/QC procedures	The number of persons employed would be mentioned in the plant register, which can be crossed checked with daily attendance register. Salary slip can be checked for earnings of employees
Purpose of data	Continuation of regular training/workshops for employees & O&M staff
Additional comment	-

Relevant SDG Indicator 13.2.1: Climate Action

Data / Parameter	Air Quality
Unit	tCO_2e
Description	Reduction in CO_2 emission reduction due to implementation of project activity
Measured/calculated/default	Measured
Source of data	Calculated as per "Tool to calculate the emission factor for an electricity system,". The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 15.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) of monitored parameter	(117,265)[26] tCO_2e Vintage date: (01/07/2024 to 31/12/2024)

[26] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

Monitoring equipment	Not Applicable, as it a calculated parameter
Measuring/reading / recording frequency:	Once in a Monitoring period
Calculation method (if applicable)	Calculated from CEA database and Energy Generation
QA/QC procedures	There is no as such QA/QC required as it is calculated based on the generation data and QA/QC for generation data is as follows: Calibration records are maintained at the plant. Data is cross verified against sold electricity figure in the joint meter reading statement issued by the Gujarat Urja Vikas Nigam Limited (GUVNL). It is to be noted that the meters in question are in control and supervision of GUVNL and are calibrated only as and when GUVNL so desires. The metering system comprises of the main, check and standby meter. In the event that the main metering system is not in service due to maintenance, repair or testing, the reading is obtained from the check meter. In the event that the Main meter and check meter both are not in service as a result of maintenance, repairs or testing, the Standby meter will be used for readings.
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be archived for crediting period+2 years

Relevant Safeguarding Principle 4.3.5: Hazardous and Non- hazardous waste

Data / Parameter	Safeguarding principle 4.3.5: Hazardous and Non-hazardous Waste
Unit	tons
Description	The manufacture, trade, release, and use of hazardous and non- hazardous chemicals and/or materials
Measured/calculated/ default	Measured
Source of data	Plant Records
Value(s) applied	0
Monitoring equipment	-
Measuring/reading / recording frequency:	Once in a monitoring period
Calculation method (if applicable)	-

QA/QC procedures	The waste will be disposed of by the waste handlers and the firm will comply with all the local laws for monitoring and disposal.
Purpose of data	Analysis of safeguarding principle
Additional comment	-

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

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
NA		
NA		

As per monitoring template guidelines, this section is not applicable for non- Community Service Activities, hence not applicable.

D.4. Implementation of sampling plan

No sampling process is involved as the project activity is a Solar Power generation. Hence, this section 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:

The monitoring parameter for the SDG 7 is Quantity of net electricity supplied to the grid during the year y. Since baseline and pre-project scenario are same, in the baseline condition no renewable electricity will be 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)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	0

SDG 8:

The monitoring parameter for the SDG 8 are Number of trainings provided to employees & O&M staff, Cost spent for O&M & Number of O&M staffs involved in the project. Since baseline and pre-project scenario are same, in the baseline condition these values are zero.

Vintage	Baseline Value		
	Number of trainings (Nos)	Income generation (Lakh INR)	Number of employees (Nos)

01/07/2024 to 31/12/2024 (Inclusive of both the dates)	0	0	0

SDG 13: -

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[27] that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

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

Where,

BE_y = Baseline emissions in year y, (tCO_2e/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

Calculation of $EG_{PJ, y}$

The calculation of $EG_{PJ, y}$ is different for

a) Greenfield plants,
b) Retrofits and replacements, and
c) Capacity additions

The project activity is the installation of solar projects, and it is a green field project. So, the formula in option (a) i.e., greenfield plants are used to calculate the value of $EG_{PJ, y}$. In accordance with para 41 of the applied methodology[28]:

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

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/yr).

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

[27] As per para 39 of section 5.5 "Baseline emissions" of the Methodology ACM0002 v20.0
[28] https://cdm.unfccc.int/UserManagement/FileStorage/AG07ZJQ3EXD42LT5YV9HR16M8KINPO

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

BE_y= 124,498.63* 0.9419

BE_y= (117,265)[29]tCO_2e (Rounded down)

The quantity of Emission Reductions (ERs) that was previously capped during the Monitoring Period (01/01/2024 to 30/06/2024) is now being carried forward and proposed to be claimed as part of the current Monitoring Period (01/07/2024 to 31/12/2024). These ERs were generated and verified during the previous MP but could not be issued at that time, and hence are now included in the current ER claim submission.

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Thus, the estimated baseline situation of each SDG outcomes is summarised as follows:

SDGs	Baseline value
SDG 7: Affordable and Clean Energy	No Activities in the baseline
SDG 8: Decent Work and Economic Growth	No Activities in the baseline
SDG 13: Climate Action	Emission of (117,265)[30]tCO_2e

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

SDG 7: 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 124,498.63 MWh electricity during the monitoring period. This can be crosschecked from JMR & Invoices.

During Monitoring period - (01/07/2024 to 31/12/2024) (Inclusive of both the dates)

Quantity of net electricity supplied to the grid (MWh) = 124,498.63

Vintage	Project Value
	Quantity of net electricity supplied to the grid (MWh)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	124,498.63
Total	**124,498.63**

[29] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

[30] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

SDG 8: The monitoring parameter for the SDG 8 are Number of trainings provided to employees & O&M staff, Cost spent for O&M & Number of O&M staffs involved in the project. During the project scenario, the following is achieved:

During Monitoring period - (01/07/2024 to 31/12/2024) (Inclusive of both the dates)

Quality of Employment – 8 Trainings

Quantitative employment and income generation - 22 employees & 5,238,725 INR[31]

These can be crosschecked from the training records, O&M contract & employment records.

Vintage	Project Value		
	Number of trainings (Nos)	Income generation (INR)	Number of employees (Nos)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	08	5,238,725	22
Total	**08**	**5,238,725**	**22**

SDG 13: The monitoring parameter for the SDG 13 is Quantity of emission reduction during the year y. In the project situation, the project reduced 117,265tCO_2e during the current monitoring period. This parameter is calculated.

During Monitoring period - (01/07/2024 to 31/12/2024)

Quantity of emission reduction – (117,265)[32]tCO_2e

Vintage	Project Value		
	Net generation (MWh)	Grid Emission Factor (tCO_2/MWh)	Emission Reduction (tCO_2)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	124,498.63	0.9419	117,265

[31] INR here signifies the total income generated for skilled employees.

[32] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

As per para 31 of section 5.4 of the approved consolidated Methodology ACM0002 (Version 20.0):

"For most renewable energy power generation project activities, PE_y = 0. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted as project emissions by using the following equation:

$$\mathbf{PE_y = PE_{FF,\,y} + PE_{GP,\,y} + PE_{HP,\,y}}$$

Where:

PE_y - Project emissions in year y (tCO_2e/year)

$PE_{FF,\,y}$ - Project emissions from fossil fuel consumption in year y (tCO_2/ year)

$PE_{GP,\,y}$ - Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (tCO_2e/ year)

$PE_{HP,\,y}$ - Project emissions from water reservoirs of hydro power plants in year y (tCO_2e/ year)

" As the project activity is the installation of a new grid-connected Solar power plant/unit and does not involve any project emissions from fossil fuel, operation of dry, flash steam or binary geothermal power plants, and from water reservoirs of hydro power plants. Therefore $PE_{FF,\,y}$, $PE_{GP,\,y}$, $PE_{HP,\,y}$ is equal to zero and thus, PE_y = 0 tCO_2.

Vintage	Project Emission (tCO_2e)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	0

E.3. Calculation of leakage

As per para 53 of section 5.6 of the approved consolidated Methodology ACM0002 (Version 20.0):

No leakage emissions are considered in the project activity. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, and transport). Since the emissions sources are small, it is neglected, thus, LE_y = 0 tCO_2.

Vintage	Leakage Emission (tCO_2e)
01/07/2024 to 31/12/2024 (Inclusive of both the dates)	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 and Clean Energy (MWh)	0	124,498.63	124,498.63
8	Decent Work and Economic Growth	0	08 Trainings 22 employees INR 5,238,725	08 Trainings 22 employees INR 5,238,725
13	Climate Action (mandatory) (tCO_2)	117,265	0	(117,265)[33]

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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[34] achieved during this monitoring period
7	292,335 MWh/year 147,368.88MWh for the monitoring period (184 days)	124,498.63 MWh
8	1 Trainings 15 employees	08 Trainings 22 employees 5,238,725 INR
13	275,350 tCO_2/year 138,806tCO_2 for the monitoring period (184 days)	(117,265)[35]tCO_2

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

SDG 7: Affordable and Clean Energy

The annual estimated power generation for the project activity is 292,335 MWh/year, thus considering number of days covered during current monitoring period to be 184, the estimated power generation is 147,368.88MWh. Whereas the actual power generation is 124,498.63 MWh.

[33] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

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

[35] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

= 298,335 * 184 (days) / 365
=147,368.88MWh

SDG 8: Decent Work and Economic Growth

The annual estimation regarding SDG 8 is 01 training and giving employment to 15. Thus, considering number of days covered during the current monitoring period to be 182, the estimation regarding SDG 8 for current monitoring period are 01 training and giving employment to 15 persons. Whereas during the current monitoring period and in actual 08 trainings given to employees, total 22 employees are working and the income generation is 5,238,725 INR during the current monitoring period.

SDG 13: Climate Action

The annual estimated emission reduction for the project activity is 275,350 tCO_2e, thus considering number of days covered during the current monitoring period to be 184, the estimated emission reduction is 138,806tCO_2e. Whereas the actual emission reduction is 117,265tCO_2e.

= 275,350 * 184 (days) / 365
=138,806tCO_2e (Round down)

The below comparison of SDG 7, SDG 8 and SDG 13 for the monitoring period of 01/07/2024 to 31/12/2024 is as follows:

SDG	Parameter	Annual Average Estimation as per PDD	Estimation for the monitoring period	Actual Achieved during the monitoring period	Difference
7	Renewable electricity generation (MWh)	292,335	147,368.88	124,498.63	-15.52 %
8	Number of Trainings Conducted	1	NA	08	NA
	Income generation (INR)	NA	NA	5,238,725	NA
	Number of Employment	15	15	22	53.33%

13	Emission Reduction (tCO_2e)	275,350	138,806	(117,265)[36]	-15.52 %

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

The emission reductions as per the registered PDD for the current monitoring period is estimated to be 138,806tCO_2e whereas during the current monitoring period the emission reductions claimed are 117,265tCO_2e, which is approximately -15.52 % lower than the estimated emission reductions for the same monitoring period. The decrease in actual emission reductions is justified, since during the current monitoring period most of the months have lower yield months and lower sunshine hours. The generation is subject to climate conditions which are beyond the control of the Project Developer. The current monitoring period is 01/07/2024 till 31/12/2024. Moreover, the difference is due to the variation in the Solar radiation's availability during the current monitoring period, which is a natural uncontrolled phenomenon and may vary.

As per the registered PDD the estimated PLF is 28.36% and as per the actual generation during the current monitoring period, PLF is 23.49% which is -17.16% lower as compared to estimated PLF.

SECTION F. SAFEGUARDS REPORTING

As per the safeguarding Principles Assessment in Section D.1. of the GS4GG PDD, there is one safeguarding principle (4.3.5: Hazardous and Non-hazardous Waste) which is included in the monitoring plan (Refer section D.2 above). Also, there are no any impact (positive/negative/slightly) for any mitigation measures, being applicable to any of the safeguarding principles.

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.

S. No	Site Name	Grievance Received
1.	Babsar	N/A

[36] #Actual ER Claimed for Current Monitoring Period 118,300 tCO2e. The calculation has been clearly detailed in the Excel sheet.

2.	Bhordu	N/A
3.	Khadol	N/A

As a part of continuous feedback from stakeholders, the grievances register is placed at main gate of each site and is being continuously monitored and addressed through the grievances cell on a regular basis and maintained in a register at the site office. A copy of the Grievance Register has been provided separately. There has been no grievance received during the current monitoring period.

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

There has been no stakeholder mitigation that was agreed to be monitored in this verification period.

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

No, there has been no legal contest that has arisen with the project during the monitoring period.

Appendix – 1 Meter Details

1. For 35 MW solar plant connected to Babsar Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4583A	Main meter	Secure	0.2s	20/06/2023	19/06/2026
2	GJ4584A	Check meter	Secure		20/06/2023	19/06/2026
3	GJ4585A	Standby meter	Secure		20/06/2023	19/06/2026

2. For 40 MW solar plant connected to Bhordu Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4603A	Main meter	Secure	0.2s	08/07/2023	07/07/2026
2	GJ4604A	Check meter	Secure	0.2s	08/07/2023	07/07/2026
3	GJ4605A	Standby meter	Secure	0.2s	08/07/2023	07/07/2026

3. For 45 MW solar plant connected to Khadol Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4606A	Main meter	Secure	0.2s	08/08/2023	07/08/2026
2	GJ4607A	Check meter	Secure	0.2s	08/08/2023	07/08/2026
3	GJ4608A	Standby meter	Secure	0.2s	08/08/2023	07/08/2026

Appendix – 2 Training Details

1. For 45 MW solar plant connected to Khadol Substation:

S.No.	Date	Topics	Number of participants
1	23/09/2024	First Aid and CPR Training	3
2	28/09/2024	Fire Training	3

2. For 35 MW solar plant connected to Babsar Substation:

S.No.	Date	Topics	Number of participants
1	23/09/2024	First Aid and CPR Training	3

3. For 40 MW solar plant connected to Bhordu Substation:

S.No.	Date	Topics	Number of participants
1	23/09/2024	First Aid and CPR Training	3
2	04/10/2024	PTW training	4
3	11/10/2024	Fire Training and Demonstration	4
4	18/10/2024	LOTO Training	4
5	21/10/2024	Work at Height Training	4

Therefore, the total number of trainings conducted for both the sites in the current monitoring period are 08.

Appendix – 3 Shutdown details/major maintenance or disruption in power generation

1. For 40 MW solar plant connected to Bhordu Substation:

Date	B/d Description	Start time	Stop time	Total down time Hrs.
14-Jul-24	Grid BD from GSS	8:45	8:54	0:09
14-Jul-24	Grid BD from GSS	9:28	9:44	0:16
17-Jul-24	Grid BD from GSS	6:24	7:30	1:06
17-Jul-24	Grid BD from GSS	12:24	12:33	0:09
19-Jul-24	Grid BD from GSS	11:44	11:54	0:10
22-Jul-24	Grid BD from GSS	18:20	18:29	0:09
29-Jul-24	Grid BD from GSS	12:55	13:05	0:10
31-Jul-24	Grid BD from GSS	14:37	15:00	0:23
6-Aug-24	Grid BD from GSS	11:36	11:46	0:10
10-Aug-24	Grid BD from GSS	12:42	12:57	0:15
28-Aug-24	Grid BD from GSS	12:10	12:20	0:10
30-Aug-24	Grid BD from GSS	12:54	13:05	0:11
5-Sep-24	Grid BD from GSS	7:00	7:30	0:30
6-Sep-24	Grid BD from GSS	13:36	13:48	0:12
15-Sep-24	Grid BD from GSS	11:07	11:16	0:09
30-Oct-24	Grid BD from GSS	15:36	15:50	0:14
22-Nov-24	Grid BD from GSS	9:44	10:05	0:21
29-Nov-24	Grid BD from GSS	16:36	17:07	0:31
12-Dec-24	Grid BD from GSS	10:12	11:07	0:55
16-Dec-24	Grid BD from GSS	7:53	12:26	4:33
27-Dec-24	Grid BD from GSS	17:28	17:31	0:03
Total				**10:46:00**

2. For 35 MW solar plant connected to Babsar Substation:

Date	B/d Description	Start time	Stop time	Total down time Hrs.
20-Jul-24	Grid BD from GSS	6:11	6:22	0:11
31-Jul-24	Grid BD from GSS	12:12	12:28	0:16
5-Aug-24	Grid BD from GSS	13:41	13:52	0:11
17-Aug-24	Grid BD from GSS	12:07	12:19	0:12
22-Aug-24	Grid BD from GSS	17:36	17:54	0:18
10-Sep-24	Grid BD from GSS	9:03	9:34	0:31
23-Oct-24	Grid BD from GSS	8:13	16:24	8:11
21-Nov-24	Grid BD from GSS	11:37	12:01	0:24
22-Nov-24	Grid BD from GSS	11:41	12:09	0:28
22-Nov-24	Grid BD from GSS	12:11	12:25	0:14
26-Nov-24	Grid BD from GSS	11:49	12:03	0:14
26-Nov-24	Grid BD from GSS	16:04	16:22	0:18
21-Dec-24	Grid BD from GSS	7:45	10:15	2:30
Total				**13:58:00**

3. For 45 MW solar plant connected to Khadol Substation:

Date	B/d Description	Start time	Stop time	Total down time Hrs.
30-Sep-2024	Grid BD from GSS	8:50	9:11	0:21
30-Sep-2024	Grid BD from GSS	9:33	9:44	0:11
03-Oct-2024	Grid BD from GSS	6:42	7:13	0:31
08-Oct-2024	Grid BD from GSS	9:32	9:44	0:12
08-10-2024	Grid BD from GSS	9:45	9:59	0:14
22-Oct-2024	Grid BD from GSS	10:31	10:49	0:18
Total				**1:47:00**

Therefore, the total maintenance and downtime for the current monitoring period is 26:31:00 hrs.

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