



Gold Standard[®]
for the Global Goals

Climate Security & Sustainable Development

MONITORING REPORT

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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)	GS7139
Title of the project (s) covered by monitoring report	50 MW (DCR) Nalgonda Solar PV Power Project by Parampujya Solar Energy at Telangana
Version number of the PDD / VPA-DD (s) applicable to this monitoring report	06
Version number of the monitoring report	06
Completion date of the monitoring report	02/12/2022
Date of project design certification	16/11/2020
Date of Last Annual Report	NA
Monitoring period number	01
Duration of this monitoring period	16/11/2018 to 31/12/2020 (both days included)
Project Representative	Parampujya Solar Energy Private 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
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units / Products
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SDG 7: Affordable and Clean Energy	MWh of renewable energy generated	230,468	MWh
SDG 8: Decent Work and Economic Growth	Trainings	10	Training
	Employees	22	Employees
	Income (INR)	31,304,000	INR
SDG 13: Climate Action	Emission Reduction	217,077	VERs

Table 2 – Product Vintages

		Amount Achieved
Start Dates	End Dates	VERs
16/11/2018	31/12/2018	10,380
01/01/2019	31/12/2019	101,755
01/01/2020	31/12/2020	104,942

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

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The main purpose of the project activity is to generate electrical energy through sustainable means using solar power resources, the generated green electricity will contribute to climate change mitigation efforts. This project activity is a large-scale solar project. is the project investor for this project activity.

The project activity involves installation of 05 Solar PV plants of capacity 10 MW_{AC} each, totalling to 50 MW_{AC} solar power project under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-II, Batch-II, Tranche – I, State Specific Bundling Scheme (under DCR1 Category). The projects are installed in the same project boundary at Village: Kakkireni, Distrtict: Nalgonda, State: Telangana.

The electricity generated from project activity will be sold under the Power Purchase Agreement (PPA), signed with NTPC Ltd. NTPC has been identified by the Government of India (GoI) as the Implementation Agency for setting up of Grid-connected Solar PV Power Projects under State Specific Bundling Scheme under the National Solar Mission of Government of India (GoI). and NTPC Vidyut Vyapar Nigam Limited (NVVN) on behalf of NTPC will purchase Solar Power from Solar Power Developer, and sell it to Discoms. The electricity generated from the project activity will be evacuated through 132 kV sub-station located at Narketpally for consumption in the Indian Electricity Grid.

The project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 89,549 tCO₂e per annum, thereon displacing 95,073 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 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 land for the project activity was private land prior to the project which is purchased in the name of PP. The sale deeds are available with the project participant.

The details of the project are mentioned in the table:

Capacity in MW	50 MW
	Telangana
Start Date	29/10/2016
Local Stakeholder Consultation as per CDM	07/10/2016
Commissioning Date	17/11/2017
PPA	04/08/2016
SFR Date	22/05/2019
Project registered under CDM	27/08/2020
Grid	NTPC Ltd.
Types of Solar PV Modules	Poly-crystalline

A.2. Location of project

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The Project is located at Kakrani village of Nalgonda district, in the Indian state of Telangana. The nearest commercial city remains Hyderabad, which is approximately 90km from the Project site location. Vijayawada-Hyderabad National Highway NH-65 connects the Project site to Hyderabad. Nearest major airport to the site remains Hyderabad, 90km away; while the nearest railway station is at Nalgonda, approximately 11 km away from the site.

Plant site coordinates:

Latitude: 17° 16'18.96"N

Longitude: 79°12'16.98"E



A.3. Reference of applied methodology

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Title : Grid-connected electricity generation from renewable sources.

References : Approved Large Scale Consolidated Methodology: ACM0002 “Grid-connected electricity generation from renewable sources” (Version 20.0, EB 105 Annex 3) ¹

ACM0002 draws upon the following tools which have been used in the PDD:

- Methodological Tool: Tool to calculate the emission factor for an electricity system - Version 07.0.
- Methodological Tool: Tool for the demonstration and assessment of additionality - Version 07.0.0, EB 70 Annex 8²

A.4. Crediting period of project

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Type	Renewable
CDM crediting period	27/08/2020 to 26/08/2027 ³
GS crediting period	16/11/2018 ⁴ to 15/11/2023
Length of Crediting period	5 years Which will be renewed twice totalling to 15 years
Current Monitoring Period	16/11/2018 to 31/12/2020 (Both Date included)

PP hereby declares that they will not move back to CDM for issuance in future and the project activity will/has not issue both a CER/other compliance unit under Paris Agreement and GS VER for the same vintage.

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

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¹ <https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

³ <https://cdm.unfccc.int/Projects/DB/Appendix1597924591.34/view>

⁴ GHG Emissions Reduction & Sequestration Product Requirements v.2.1 10.2.1 | The start date of Crediting Period is the date of start of operation (start of planting for A/R Projects) or a maximum of two years (three years for A/R & AGR) prior to the date of Project Design Certification, whichever occurs later.

The project activity aims to harness solar energy through installation of PV with total installed capacity of 50 MW_{ac}. The solar PV power plant has solar PV modules, inverters, transformers and other protection system and supporting components. The solar PV power plant has solar PV modules, inverters, transformers and other protection system and supporting components.

The solar PV modules have a useful life of 25 years.

A. Solar PV modules:

Module Supplier	Module Model	Capacity (p)	Number	Total Capacity (MWp)
Adani	Poly C-Si	310	9856	3.06
Adani	Poly C-Si	315	58036	18.28
Adani	Poly C-Si	320	108240	34.64
Adani	Poly C-Si	325	28512	9.27
Total Capacity in MWp				65.24

B. Invertor

S.No.	Make	
1.	Manufacturer	Huawei
2	Model	SUN2000-43KTL
3	Rated Capacity	43 KW, 52.5 KVA
4	No. of Inverters	1163
5	Rated Input Voltage (Max.Input Voltage)	500 V

C. Transformer

S. No	Make		
1	Manufacturer	CGL	T&R
2	Capacity	50/60MVA	5MVA
3	No. of Transformers 10	1	10
4	Voltage Ratio	33/132KV	.500/33 KV

D. Metering Equipment Details

S.No.	Make	Sub-Station	Solar Plant End
1	Manufacturer	Secure Make	L&T Make
2	Type	ABT meters	ABT meters
3	Accuracy Level	0.2s	0.2s
4	Total no of meter	3	5*2 = 10

B.1.1 Forward Action Requests

>>No FAR raised.

B.2. Post-Design Certification changes

>>Not Applicable

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

>>Not Applicable

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

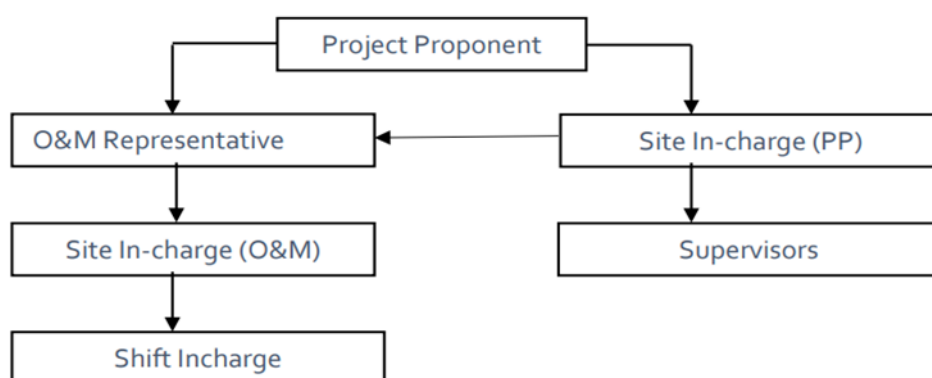
>>Not Applicable

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

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The monitoring plan is developed in accordance with the modalities and procedures for project activities and is proposed for grid-connected solar power project/ unit being implemented in Telangana, India. The monitoring plan, implemented by the project participant 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 monitoring, measurement, reporting and reviewing of the data rests with the project participant.



Responsibilities of Site Incharge (PP): Overall functioning and maintenance of the project activity, the Site incharge shall coordinate with the O&M operator as well as the site supervisors.

Responsibilities of O&M Representative: Co-ordination between Site incharge of the O&M operator as well as the project participant and further report to PP 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.

Data Measurement

The export and import energy is measured continuously using above mentioned Main & Check meters. Export & Import readings of Main & Check meters is taken on monthly

basis by authorized officer of TS Transco Nalgonda in the presence of PP or representative of PP. The meter reading is taken jointly and signed by the representatives of the TS Transco and project investors. Based on the readings, invoices will be raised by project investors. These invoices can be used for cross checking the meter readings taken for the project activity. It is to be noted though PP or PP representative is available during meter reading, the calculations of net electricity supplied to grid is completely under purview of TS Transco officer and PP do not have any control on it. Also accuracy class of meters and calibration frequency is under purview of TS Transco officer and PP do not have any control on it. PP got the monthly credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

It is to be noted that though the PP or their representatives are available during meter reading, the calculations of net electricity supplied to grid is completely under purview of TS Transco and PP does not have any control on it. Also accuracy class of meters and calibration frequency is under purview of TS Transco and PP does not have any control on it. PP gets the monthly credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

Data collection and archiving

Export & Import readings from the meters is collected under the supervision of the authorized representatives of PP. The net electricity supplied to grid would be calculated based on export & import readings. Export and Import data is recorded and stored in electronic&/or Paper format. 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 2years after the end of crediting period or till the last issuance of GS CERs 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 are not matching of billing period and monitoring period.

B = Number of days of the billing period/ month which was not matched with the monitoring period.

C = Net Electricity supplied to the grid for that given billing period/ month.

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

For the month of November -2018 apportioning has been carried out

The current monitoring period starts from 16/11/2018 to 31/12/2020

Therefore, following the above mentioned apportioning procedure:

A	Difference of number of days which are not matching for November	15
B	Number of days of November	30
C	Net Electricity supplied to the grid for November	8712206

the net electricity exported to the grid is calculated from:

$$\begin{aligned}
 D &= (A/B) * C \\
 &= (15/30) * 8712206 \\
 &= 4356103 \text{ KWh}
 \end{aligned}$$

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 unlikely event of failure of all Main, Check as well as Standby meter installed at Substation, where all the faulty meters are required to be repaired or replaced simultaneously, the export & import readings from Main, Check & Standby Meters installed at the inter-connection point at the project site will be used for monitoring of net electricity exported to the grid.

Personnel training

In order to ensure a proper functioning of the project activity and a proper monitoring of emission reductions, the staff is 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.

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

Relevant SDG Indicator	SDG13 : Climate Action
Data/parameter	EF _{OM,y}
Unit	tCO ₂ e/MWh
Description	Operating Margin Emission Factor of Indian Grid
Source of data	Calculated from CEA database, Version 15, December 2019 ⁵
Value(s) applied	0.9622
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system," as 3-year generation weighted average using data for the years 2016-17, 2017-18 & 2018-19. The data are obtained from "CO2 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.

Relevant SDG Indicator	SDG13 : Climate Action
Data/parameter	EF _{BM, y}
Unit	tCO ₂ e/MWh
Description	Build Margin Emission Factor of Indian Grid
Source of data	Calculated from CEA database, Version 15, Dec 2019
Value(s) applied	0.8811

⁵ <http://cea.nic.in/tpeandce.html>

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 “CO2 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.

Relevant SDG Indicator	SDG13 : Climate Action
Data/parameter	EF _{CM, y}
Unit	tCO ₂ e/MWh
Description	Combined Margin Emission Factor of Indian Grid
Source of data	Calculated from CEA database, Version 15, Dec 2019
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 “CO2 Baseline Data base 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	-

D.2 Data and parameters monitored

>> **Relevant SDG Indicator 7.2:** By 2030, increase substantially the share of renewable energy in the global energy mix

Relevant SDG Indicator	SDG 7.2.1 : Affordable and Clean Energy
Data / Parameter	EG _{PJ,y}
Unit	MWh
Description	Quantity of net electricity supplied to the grid
Source of data	Generation statement provided by TSSPDCL Nalgonda every month.
Value(s) monitored	230,468 MWh

Measurement methods and procedures	Data Type: Measured																														
	Monitoring equipment: Energy Meters of accuracy class 0.2s																														
	Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually.																														
	Archiving Policy: Paper &/or Electronic																														
	Calibration frequency: Once in 5 years as per CEA guidelines																														
	Electricity exported/imported to the grid is in kWh. However, for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the 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 TSSPDCL Nalgonda as per below equation:																														
	$EG_{PJ,y} = EG_{Export} - EG_{Import}$																														
	Projects activity comprises of installation of total 13 Energy meters out of which 10 meters are placed in Solar plant end (2 Energy meters at each 10 MW; 1 main meter and 1 check meter) and 3 Energy meters (1 main, 1 check & 1 Standby meter) at Govt. pooling Substation for joint metering at substation interconnection point.																														
	<table><tr><td>Make</td><td>Sub-Station</td><td>Solar Plant End</td></tr><tr><td>Manufacturer</td><td>Secure Make</td><td>Secure Make</td></tr><tr><td>Type</td><td>ABT meters</td><td>ABT meters</td></tr><tr><td>Accuracy Level</td><td>0.2s</td><td>0.2s</td></tr><tr><td>Total no of meter</td><td>3</td><td>5*2 = 10</td></tr><tr><td>Main meter</td><td>APZ000361</td><td>APZ000367 APZ000368 APZ000369 APZ000370 APZ000371</td></tr><tr><td>Check meter</td><td>APZ000362</td><td>APZ000372 APZ000373 APZ000374 APZ000375 APZ000376</td></tr><tr><td>Standby meter</td><td>APZ000363</td><td>-</td></tr><tr><td>Date of calibration</td><td></td><td>04/07/2017</td></tr><tr><td>Due date of calibration</td><td>-</td><td>03/07/2022</td></tr></table>	Make	Sub-Station	Solar Plant End	Manufacturer	Secure Make	Secure Make	Type	ABT meters	ABT meters	Accuracy Level	0.2s	0.2s	Total no of meter	3	5*2 = 10	Main meter	APZ000361	APZ000367 APZ000368 APZ000369 APZ000370 APZ000371	Check meter	APZ000362	APZ000372 APZ000373 APZ000374 APZ000375 APZ000376	Standby meter	APZ000363	-	Date of calibration		04/07/2017	Due date of calibration	-	03/07/2022
	Make	Sub-Station	Solar Plant End																												
Manufacturer	Secure Make	Secure Make																													
Type	ABT meters	ABT meters																													
Accuracy Level	0.2s	0.2s																													
Total no of meter	3	5*2 = 10																													
Main meter	APZ000361	APZ000367 APZ000368 APZ000369 APZ000370 APZ000371																													
Check meter	APZ000362	APZ000372 APZ000373 APZ000374 APZ000375 APZ000376																													
Standby meter	APZ000363	-																													
Date of calibration		04/07/2017																													
Due date of calibration	-	03/07/2022																													

	Cross Checking: Quantity of net electricity supplied to the grid will be cross checked from the Invoices/ Monthly Bill raised by the Project Participant to NTPC Limited .
Monitoring frequency	Monthly
QA/QC procedures	Calibration of all the meters will be undertaken once every five year and faulty meters will be duly replaced immediately. The meters will be of accuracy class 0.2s. Cross Checking: Quantity of net electricity supplied to the grid will be cross checked with the Invoices/ Monthly Bill raised by the Project Participant to NTPC Limited and the JMR issued to PP.
Purpose of data	The Data/Parameter is required to calculate the baseline emission
Additional comment	Data will be archived electronically for a period of 2 years beyond the end of crediting period.

Relevant SDG Indicator 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Relevant SDG Indicator	SDG 8.5.1: Decent Work and Economic Growth
Data / Parameter	Quality of employment
Unit	Number (employees) Number (Trainings) INR (salary)
Description	Number of Trainings provided to employees & O&M staff Number of project employees Salary given to the employees of the project.
Source of data	Training Records (HSE & HR) & Employee feedback forms Salary Slip of the project employees.
Value(s) applied	Some of the trainings & workshops that are given to the respective O&M staffs . • HSE Training Record • Regular Drill Record • Handling of Equipment Training • Soft Skill Training The training programmes help in making the workforce efficient and skilled at their job. This not only helps the company but adds to growth of individual employees. Thus, the project has a positive impact on the parameter.

	S No.	Name of training	No. of participants	Date of training
	1.	First Aid awareness	10	20/12/2019
	2.	Awareness on emergency preparedness and response	13	21/11/2019
	3.	Hand and tool safety	13	11/11/2019
	4.	reporting	15	15/10/2019
	5.	Material handling	13	13/09/2019
	6.	Electrical safety	15	09/09/2019
	7.	OHS	6	18/01/2019
	8.	Concern reporting	11	18/02/2019
	9.	Excavation & trenching procedure	20	17/01/2019
	10.	Safety training	12	15/01/2020
	The total number of staff (including O&M staff, management, outsourced jobs as well as security guards) employed by Parampujya Solar Energy Private Limited during O&M phase of the project activity will be 22.			
	S No.	Year	No. of employees	
	1.	2018	20	
	2.	2019	22	
	3.	2020	22	
	Total expenses for the O&M during the monitoring period is 3,13,04,000 INR			
	The parameter has a positive impact as the project results in direct employment and income generation.			
Measurement methods and procedures	• Training Attendance sheets and records. • Employment Records • Salary slip of the employees			
Monitoring frequency	Annually			
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 female and male employees			
Purpose of data	Continuation of regular trainings/workshops for employees & O&M staffs			
Additional comment	-			

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

Relevant SDG Indicator	SDG13.2.1 : Climate Action
Data / Parameter	Air quality
Unit	tCO ₂
Description	Reduction in CO2 emission reduction due to implementation of project activity
Source of data	Calculated as per "Tool to calculate the emission factor for an electricity system,". The data are obtained from "CO2 Baseline Database for Indian Power Sector" version 15.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) Monitored	217,077 tCO ₂ e
Measurement methods and procedures	Calculated from CEA database and Energy Generation
Monitoring frequency	Annually
QA/QC procedures	A check meter is also installed near to the export meter to cross check the electricity exported to the grid. The check meter reading would also be used in case of failure of export meter
Purpose of data	Calculation of baseline emissions
Additional comment	-

Safeguarding principal 4.3.5: Hazardous and non-hazardous waste

Relevant SDG Indicator	Safeguarding principal 4.3.5:
Data / Parameter	Hazardous and Non-hazardous Waste
Unit	-
Description	The manufacture, trade, release, and use of hazardous and non-hazardous chemicals and/or materials
Source of data	Plant Records
Value(s) monitored	0
Measurement methods and procedures	Manual
Monitoring frequency	Once in a Monitoring period
QA/QC procedures	The waste is disposed to 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
Total days in Monitoring period	777	-

EG _{facility,y}	230,468 MWh	-
Emissions Reductions in tCO ₂	217,077 tCO ₂ e	-
Quantitative employment,	10 Trainings	-
Quality of employment and	22 Employees	
income generation	31,304,000 INR	

D.4. Implementation of sampling plan

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Sampling is not required for the given project activity

SECTION E. CALCULATION OF SDG IMPACTS

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

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SDG 7 & 13: -

Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes 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:

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

Where,

BE_y - Baseline emissions in year y, (tCO₂e/yr)

EG_{facility,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 CO₂ emission factor for grid connected power generation in year y

$$EG_{\text{facility,y}} = EG_{y, \text{Export}} - EG_{y, \text{Import}}$$

$$BE_y = 230,759 * 0.9419$$

= 217,077 tCO₂e (Rounded down)

SDG 8: -

Employment opportunities created for 22 persons in total and 10 trainings were conducted during the current monitoring period.

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

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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 230,759 MWh electricity during the monitoring period. This can be crosschecked from JMR & Invoices.

During Monitoring period - 16/11/2018 to 31/12/2020

Quantity of net electricity supplied to the grid (MWh) = 230,468 MWh

SDG 8:

The monitoring parameter for the SDG 8 are Number of training 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 - 16/11/2018 to 31/12/2020

Quality of Employment – 10 trainings

Quantitative employment and income generation - 22 employees & INR 31,304,000

These can be crosschecked from the training records & employment records.

SDG 13 :

As per 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:

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

Where:

PE_y - Project emissions in year y (t CO₂e/yr)

$PE_{FF,y}$ - Project emissions from fossil fuel consumption in year y (t CO₂/yr)

$PE_{GP,y}$ - Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (t CO₂e/yr)

$PE_{HP,y}$ - Project emissions from water reservoirs of hydro power plants in year y (t CO₂e/yr)”

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, $PE_y = 0$.

E.3. Calculation of leakage

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No leakage emissions are applicable.

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
7	MWh of renewable energy generated	0	230,468	230,468
8	Decent Work and Economic Growth	0	10 Trainings 22 Employees 31,304,000 INR	10 Trainings 22 Employees 31,304,000 INR
13	Emission Reduction	217,077	0	217,077

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
	95,073 MWh/Year (365 days)	
7	202,388 MWh for the Monitoring period (777 days)	230,468
		10 Trainings
8	1 training/year	22 Employees
		31,304,000 INR
	89,549 tCO ₂ /Year (365 days)	
13	190,629 tCO ₂ for the monitoring period (777 days)	217,077 tCO ₂ e

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

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It is to be noted here that as per the estimated emission reduction to be achieved from the project activity for the current monitoring period is

$$= 89,549 * 777 \text{ (days)} / 365$$

$$= 190,629 \text{ tCO}_2\text{e}$$

Whereas actual emission reductions achieved are 217,077 tCO₂e, which is approximately 14% Higher than the estimated emission reductions.

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

>>

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.

The actual achieved emission reduction for this monitoring period is 14% higher than estimated value in the PDD and is within the sensitivity range which does not breach the PLF Value as the breaching value is 21.93% in the registered CDM PDD.

SECTION F. SAFEGUARDS REPORTING

>>

No safeguarding principles were added to the monitoring plan in the registered PDD. Therefore, the relative success and failures, or improvements to proposed mitigation measures is 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.

>> As a part of continuous feedback from stakeholders, the grievances register is being placed at site and is being continuously monitored and addressed on regular basis and maintained in a registered site office.

During the monitoring period no grievances have been received. The scan copies have been provided to the VVB.

The grievances if any are recorded as per the table below:

S. No.	Date of Complaint	Topic	Date of resolution	Remark from PP
-	-	-	-	-

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

>>There is no input/grievance to follow up action.

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

>>No legal contest or dispute has been 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