

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

0 - Description of project

0 - Implementation of project

0 - Description of monitoring system applied by the project

0 - Data and parameters

0 - Calculation of SDG Impacts

0 - Safeguards Reporting

0 - Stakeholder inputs and legal disputes

KEY PROJECT INFORMATION

GS ID (s) of Project (s)	GS 7760
Title of the project (s) covered by monitoring report	Clean Electricity Generation by Solar Power Project in Rajasthan
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	05
Version number of the monitoring report	04
Completion date of the monitoring report	24/05/2022
Date of project design certification	21/09/2021
Date of Last Annual Report	NA
Monitoring period number	01
Duration of this monitoring period	15/12/2020 to 31/07/2021(Inclusive of both days)
Project Representative	Azure Power Forty Three India Pvt Ltd
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
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
SDG 7	Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern	399,184	MWh

	energy for all		
SDG 8	Decent Work and Economic Growth: Promote inclusive and sustainable economic growth, employment and decent work for all	12	Number
SDG 8	Decent Work and Economic Growth: substantially reduce the proportion of youth not in employment, education or training	05	Number
SDG 13	Take urgent action to combat climate change and its impacts	373,076	tCO ₂ e

Table 2 – Product Vintages

		Amount Achieved		
Start Dates	End Dates	SDG 7	SDG 8	SDG 13
15/12/2020	31/12/2020	12,122 MWh	00 number of trainings & 12 number of people employed by this project activity	11,329 tCO ₂ e
01/01/2021	31/07/2021	387,062 MWh	05 number of trainings & 12 number of people employed by this project activity	361,747 CO ₂ e

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The main purpose of this project activity is to generate clean form of electricity through renewable solar energy source. Azure Power Forty three Pvt. Ltd. is the promoter of the proposed project activity. The project is a renewable project activity which involves installation of 600 MW solar power project in Rajasthan. The project will replace average anthropogenic emissions of greenhouse gases (GHG's) estimated to be 1,136,050 tCO₂e per year, thereon displacing 1,215,547 MWh/year amount of electricity¹ from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel based power plant.

The details of the project and the state of installation are mentioned in the table:-

Name of the SPVs	Capacity in MW	Connection with Grid	State	Usage of Electricity
Azure Power Forty Three Pvt. Ltd	600 MW	Indian Grid	Rajasthan	Sale to grid

The project activity is promoted by Azure Power Forty Three Pvt. Ltd. Thus Azure Power Forty Three Pvt. Ltd is acting as PP for the project activity.

The commissioning details of the project activity is given below:-

Name of the SPVs	Capacity	State	Commissioning date
Azure Power Forty Three Pvt. Ltd.	150 MW	Rajasthan	15/12/2020
	100 MW		30/01/2021
	50 MW		08/02/2021
	50 MW		25/06/2021
	50 MW		08/08/2021
	200 MW		Yet to commission ²

sectoral Scope : 01 - Grid-connected electricity generation from renewable sources

Methodology : ACM0002: Grid-connected electricity generation from renewable sources- Version 20.0³

¹ For total capacity 600 MW

² It is to be noted that project activity commissioned 400 MW only and rest 200 are yet to commission and delay is commissioning is due to approval process. Commissioning of remaining 200 MW is scheduled in March-2022

³ <https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

Project Type : I. Renewable energy projects

Tools referred with above methodology are:

- Tool to calculate the emission factor for an electricity system⁴ - Version 07.0 (EB 100, Annex 04)
- Methodological Tool- Tool for the demonstration and assessment of additionality⁵ - Version 07.0.0 (EB 70, Annex 08)
- Methodological Tool- Investment analysis⁶ - Version 09.0.0 (EB 101, Annex 11)

Scenario existing prior to the implementation of project activity:

The scenario existing prior to the implementation of the project activity, is electricity delivered to the grid by the project activity that 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 to calculate the emission factor for an electricity system".

Baseline Scenario:

As per the applicable methodology, a Greenfield power plant is defined as "a new renewable energy power plant that is constructed and operated at a site where no renewable energy power plant was operated prior to the implementation of the project activity".

As the project activity falls under the definition of a Greenfield power plant, the baseline scenario as per paragraph 22 of Section 5.2.1 of applied methodology is the following:

If the project activity is the installation of a Greenfield power plant, the baseline scenario 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 to calculate the emission factor for an electricity system".

Hence, pre-project scenario and baseline scenario are the same.

Contribution to sustainable development

Ministry of Environment, Forests and Climate Change, GoI, has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. The project contributes to sustainable development using the following ways.

⁴ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

⁵ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

⁶ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v9.0.pdf>

- **Social well-being:** The project would help in generating employment opportunities during the construction and operation phases. The project activity will lead to development in infrastructure in the region like development of roads and also may promote business with improved power generation.
- **Economic well-being:** The project is a clean technology investment in the region, which would not have been taken place in the absence of the carbon credit benefits the project activity will also help to reduce the demand supply gap in the state. The project activity will generate power using zero emissions Solar based power generation which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.
- **Technological well-being:** The successful operation of project activity would lead to promotion of Solar based power generation and would encourage other entrepreneurs to participate in similar projects.
- **Environmental well-being:** Solar being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions.

A.2. Location of project

Host Country : India
 Region/State/Province etc. : Rajasthan
 Village : Jamsar
 District : Bikaner
 State : Rajasthan

Physical/Geographical location

The project is located in the state of Rajasthan in India

Name of the PP	Village	District	Latitude	Longitude
Azure Power Forty Three Pvt. Ltd	Jamsar	Bikaner	28°18'51.5 "N	73°27'04.7 "E

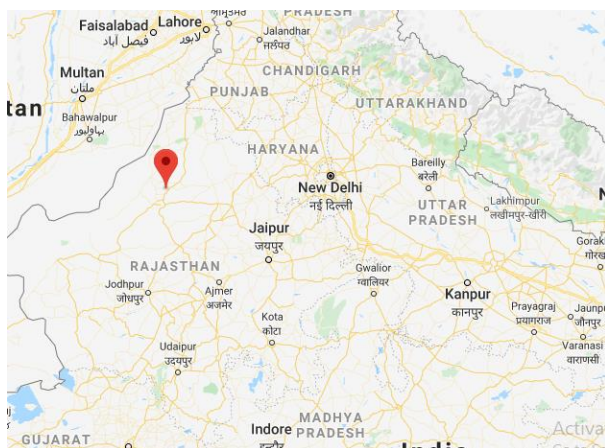




Figure 1. Location of Solar Project activity

A.3. Reference of applied methodology

Title : Grid-connected electricity generation from renewable sources⁷

Reference : The project activity meets the eligibility criteria of large scale project as it is more than 15 MW

Methodology : ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0⁸

Type I : Energy industries (renewable / non-renewable sources)

Category : Approved Consolidated Methodology (ACM0002)

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

- Tool to calculate the emission factor for an electricity system⁹ - Version 07.0 (EB 100, Annex 04)
- Tool for the demonstration and assessment of additionality¹⁰- Version 07.0.0 (EB 70, Annex 08)

Methodological Tool- Investment analysis¹¹ - Version 09.0.0 (EB 101, Annex 11)

A.4. Crediting period of project

15/12/2020 to 14/12/2025 (renewable twice)

⁷<http://cdm.unfccc.int/methodologies/PAmethodologies/approved>

⁸<https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

⁹<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

¹⁰<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

¹¹<https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v7.0.pdf>

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The project activity aims to harness solar energy through installation of PV with total installed capacity of 600 MW. Out of 600 MW, Only 400 MW has been commissioned till now and rest 200 MW is expected to commission in March-2022.

Technical Specification of plants are tabulated below:

The details of equipment installed at Azure Power Forty Three Pvt. Ltd. are as follows:

Equipment	Technical Specifications
PV Module	Make: Jinko
	Rating: 335 Wp or above
	PV Technology: Crystalline
	Number Of modules: Aprx. 2126656 Nos
	PV System Mounting Structure: Seasonal Tilt Jan/ Feb/ March: 30° April/May/ June/ July/Aug: 5° Sept/Oct/Nov/Dec: 30°
Inverter	Make: Sungrow
	Type: Central /String
	Rating: 3125 kW
	Number of Inverters: 96 Nos.

B.1.1 Forward Action Requests

FAR#1 - Projects shall seek GOLD STANDARD PROJECT DESIGN CERTIFICATION with Gold Standard by successfully completing Validation (within 2 years of the date of Listing) and subsequent Project Design Review.

PP Response: The listing date of this project activity is 15/09/2020 and the GOLD STANDARD PROJECT DESIGN CERTIFICATION started on 29/09/2020 which is within 2 years of the date of listing.

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

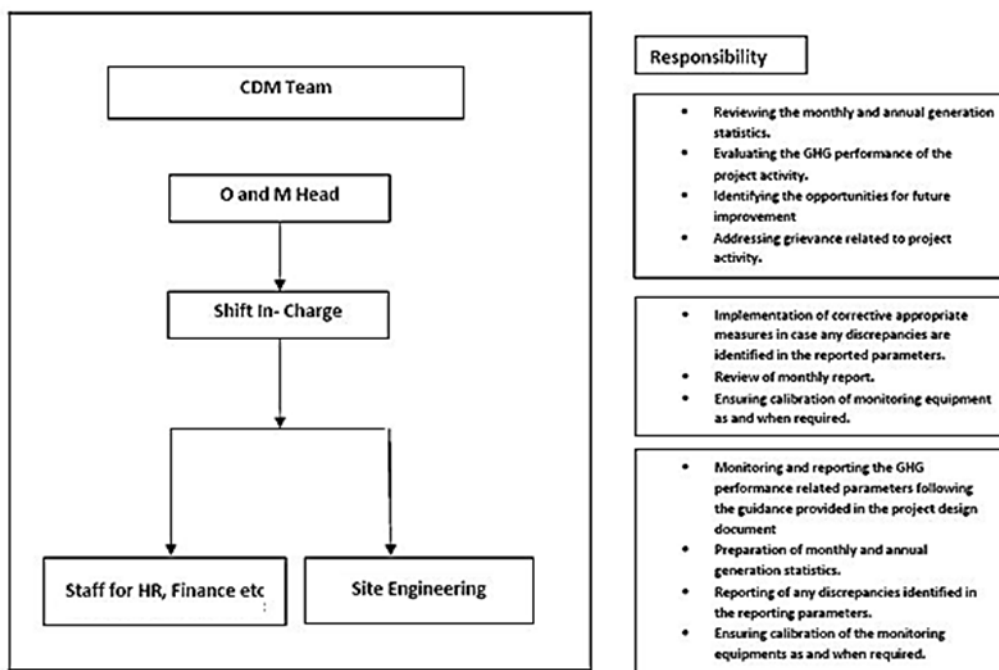
B.2.5. Changes to project design of approved project

Not applicable

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

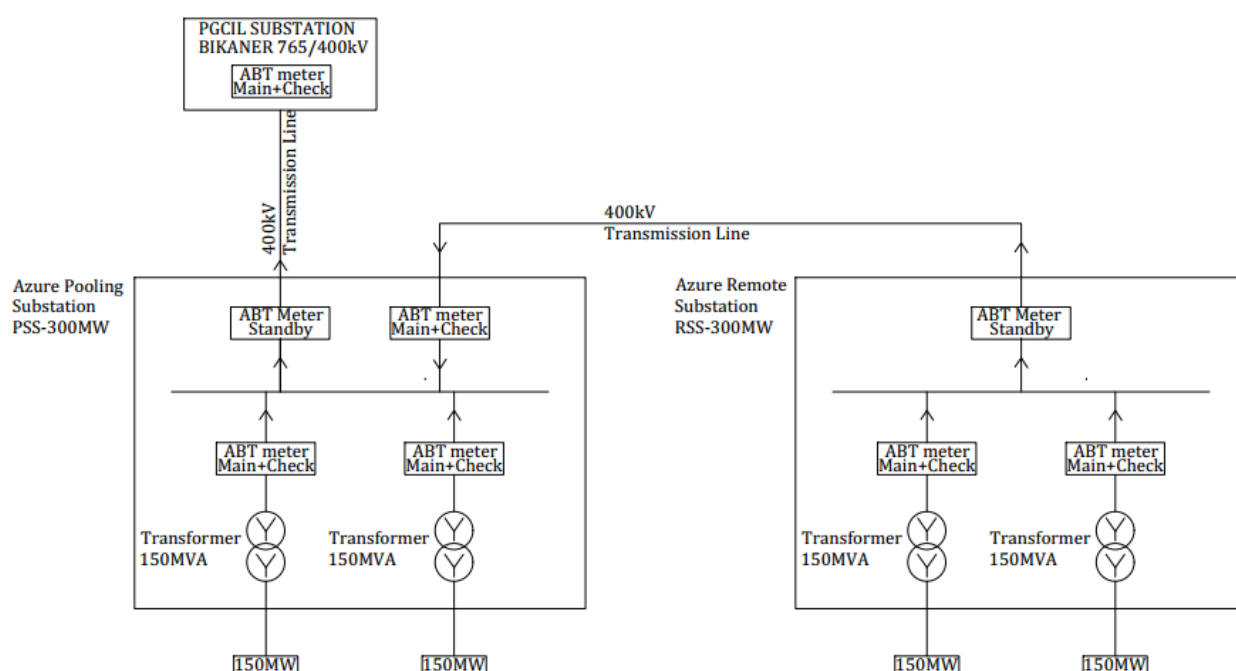
The monitoring plan is developed in accordance with the modalities and procedures for GS project activities and is proposed for grid-connected solar power project being implemented in Rajasthan, India. The monitoring plan, which is implemented by the project participant describes about the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

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



The location of energy meter is shown in the following diagram:-

SECI-1 ISTS (2x300MW) METERING ARRANGMENT - BLOCK DIAGRAM



Data Measurement

The export and import energy is measured continuously using Main, Check meters and standby meters. Readings of Main & Check meters are taken on monthly basis by authorized officer of state electricity board in the presence of PP or representative of PP. The meter reading is taken jointly and signed by the representatives of the state electricity board and project investors. Based on the readings, invoices are 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 state electricity board officer and PP do not have any control on it. Also accuracy class of meters and calibration frequency is under purview of state electricity board officer and PP do not have any control on it. PP got the monthly generation report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

Apportioning:

In case of common metering arrangement, the apportioning is done by state electricity board and PP is getting break up sheet where the energy supplied by project activity to grid is mentioned. The same break up sheet will be used for invoice purpose. This apportioning process is under control of state electricity board and PP do not have any control on it.

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.

Data Archiving:

Monthly data is archived electronically and in paper form and stored for the entire crediting period and two years thereafter.

Personnel training

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

In case of mismatch between billing (JMR) period cycle and monitoring period cycle, the daily generation electricity data is used to calculate the electricity for specific period.

In case common metering arrangement at substation, apportioning is followed by state electricity board and PP is getting the value of export/import or net electricity export and this value is considered for emission reduction calculations.

Training and maintenance requirements:

Each and every site personnel is provided with proper training to meet the requirements of the operations and maintenance. This ultimately leads to creativity in problem solving.

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 for the said mismatch period.

SECTION D. DATA AND PARAMETERS

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

Data/parameter	$EF_{grid,OM,y}$
Unit	tCO ₂ /MWh

Description	Operating Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 16.0, March 2021 ¹²
Value(s) applied	0.9568
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 07" as per the latest data available for the most recent year 2017-18, 2018-19 and 2019-20. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 16.0, 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.

Data/parameter	EF _{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 16.0, March 2021 ¹³
Value(s) applied	0.8682
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 07" as per the latest data available for the most recent year 2019-20. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 16.0, March 2021, 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

¹²https://cea.nic.in/wp-content/uploads/baseline/2021/06/User_Guide_ver_16_2021-1.pdf

¹³https://cea.nic.in/wp-content/uploads/baseline/2021/06/User_Guide_ver_16_2021-1.pdf

	period.
Data/parameter	$EF_{grid,CM,y}$
Unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 16.0, March 2021 ¹⁴
Value(s) applied	0.9346
Choice of data or Measurement methods and 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 CO₂ emission factor in year y (tCO₂/MWh) $EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM} = Weighting of build margin emissions factor (%) = 25%
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

SDG 13 (Indicators 13.2.1)

Data / Parameter	ER_y
Unit	tCO ₂ e
Description	Emission reductions achieved during this monitoring period
Source of data	As per ER sheet.
Value(s) applied	373,076

¹⁴https://cea.nic.in/wp-content/uploads/baseline/2021/06/User_Guide_ver_16_2021-1.pdf

Measurement methods and procedures	The baseline emissions are the product of electrical energy baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.
Monitoring frequency	As per monitoring period
QA/QC procedures	Not Applicable
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 or of the last issuance of GS-VERs for this project activity, whichever occurs later.

SDG 7 (Indicators 7.2.1)

Data / Parameter	EG PJ, y				
Unit	MWh				
Description	Quantity of net electricity generation supplied by the project plant/unit in year y in MWh				
Source of data	Monthly joint meter reading reports				
Value(s) applied	399,184				
Measurement methods and procedures	The electricity exported / supplied by the project activity is measured through meters (ABT Meters) having accuracy class of 0.2s. It is difference of export and import of project activity. Meter details are provided below:-				
	Meter	Sr. No.	Make	Calibration date	Due date of calibration
	Main meter	NS1175A	Secure	08/11/2020	07/11/2025
	Check meter	NS1176A	Secure	08/11/2020	07/11/2025
	Stand by meter	NS1185A	Secure	08/11/2020	07/11/2025
Monitoring frequency	Continuous measurement & monthly recording				
QA/QC procedures	The frequency of calibration is once in 5 years ¹⁵ . The				

¹⁵ http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf

	monthly electricity supplied by the project activity in the JMR report is cross checked with invoices. In the absence or delay in the meter calibration appropriate Guidelines will be applied appropriately to confirm the JMR report is JMR report is cross checked with invoices. In the absence or delay in the meter calibration appropriate Guidelines are applied appropriately to confirm the conservativeness of metering.
Purpose of data	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 or of the last issuance of GS-VERs for this project activity, whichever occurs later.

SDG 8 (Indicators 8.5.1)

Data / Parameter	Number of employment generation															
Unit	Number															
Description	Number of people employed directly due to the project activity.															
Source of data	Plant records for all the employees/Letter from O&M contractor for employment generation/ VVB interview with employees, local stakeholders etc															
Value(s) applied	Total employment for present monitoring period is 11 with below breakup 2020: 12 2021: 12 Further below is the breakup of employment generated during the monitoring period. <table><tr><td>Year</td><td>Skilled</td><td>Unskilled</td><td>Total</td></tr><tr><td>2020</td><td>7</td><td>5</td><td>12</td></tr><tr><td>2021</td><td>7</td><td>5</td><td>12</td></tr></table>				Year	Skilled	Unskilled	Total	2020	7	5	12	2021	7	5	12
Year	Skilled	Unskilled	Total													
2020	7	5	12													
2021	7	5	12													
Measurement methods and procedures	PP has provided salary slips and employment agreement of persons directly getting employment opportunity from the project activity. Further the average hourly earnings of a person are higher than the local level. For e.g a person is getting a monthly salary of INR 62,000 then his average hourly earnings will be as follows: = 62,000/ (30*8) = INR 258/hour. This is higher than the average wage per hour in India (Average hourly earning of highly skilled workers for Zone															

	C is INR 26.85). Further the same has been crosschecked by the VVB during on site visit by means of attendance register and physical interviews and Salary Slips. The Project thus provides employment opportunities and pays salaries and welfares and also helps to increase the income and living standards of the employees.
Monitoring frequency	Monthly monitoring and annual compilation
QA/QC procedures	The number of persons employed are mentioned in the plant register, which can be crossed checked with attendance register.
Purpose of data	To Monitor the SDG 8 Indicator
Additional comment	This parameter also monitors the income generation of the staff and company policy benefits like health insurance/social security etc.

SDG 8 (Indicators 8.6.1)

Data / Parameter	Quality of Employment																										
Unit	Number																										
Description	Number of trainings provided																										
Source of data	Plant records or the trainings records for all the employees/Letter from O&M contractor for employment generation/ VVB interview with employees, local stakeholders etc.																										
Value(s) applied	06 trainings were conducted during the current monitoring period <table border="1"> <thead> <tr> <th>Sr. No</th><th>Date</th><th>Topic</th><th>No. of participants</th></tr> </thead> <tbody> <tr> <td>1.</td><td>06/06/2021</td><td>Bettery charger</td><td>11</td></tr> <tr> <td>2.</td><td>23/06/2021</td><td>String Inverter sungrow</td><td>11</td></tr> <tr> <td>3.</td><td>25/06/2021</td><td>FEXIML Portal</td><td>15</td></tr> <tr> <td>4.</td><td>28/06/2021</td><td>SHES</td><td>15</td></tr> <tr> <td>5.</td><td>27/07/2021</td><td>SHES documents</td><td>15</td></tr> </tbody> </table>			Sr. No	Date	Topic	No. of participants	1.	06/06/2021	Bettery charger	11	2.	23/06/2021	String Inverter sungrow	11	3.	25/06/2021	FEXIML Portal	15	4.	28/06/2021	SHES	15	5.	27/07/2021	SHES documents	15
Sr. No	Date	Topic	No. of participants																								
1.	06/06/2021	Bettery charger	11																								
2.	23/06/2021	String Inverter sungrow	11																								
3.	25/06/2021	FEXIML Portal	15																								
4.	28/06/2021	SHES	15																								
5.	27/07/2021	SHES documents	15																								
Measurement methods and procedures	Together with the technology supplier, the Project Participant also organizes training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.																										

Monitoring frequency	Monthly monitoring and annual compilation
QA/QC procedures	The number of persons trained are mentioned in the plant register, which can be crossed checked with attendance register.
Purpose of data	To Monitor the SDG 8 Indicator
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		

D.4. Implementation of sampling plan

Sampling is not required

SECTION E. CALCULATION OF SDG IMPACTS

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

This is a project of renewable solar energy generation supplying electricity to the grid. The baseline emissions depend of the quantity of electricity being supplied to the grid and the emission factor of the grid.

SDG 13 – Climate Action :

Baseline Emission (BE_y)

The baseline emissions are the product of electrical energy baseline EG_{PJ,y} expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

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

Where,

EG_{PJ,y} = Total quantity of net electricity delivered to the recipient facility

EF_{grid,CM,y} = Baseline emission factor

= 0.9346 tCO₂/MWh

$$\begin{aligned} BE_y &= 399,184 * 0.9346 \\ &= 373,076 \text{ tCO}_2/\text{year} \end{aligned}$$

Since $ER_y = BE_y$

Therefore, $ER_y = 373,076 \text{ tCO}_2/\text{year}$

SDG 7 – Affordable and Clean Energy:

The project is generating affordable and clean energy which would not have been possible in the baseline scenario. So, Baseline value for SDG 7 is 0 MWh

SDG 8 : Decent Work and Economic Growth

The project leads to employment opportunities which would not have been possible in the baseline scenario. Hence, no training would have been provided and employment have been generated in baseline scenario. Thus, baseline value for SDG 8 is 0.

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

SDG 13 – Climate Action :

The project estimate for SDG 13 is 0 tCO₂/year.

Hence, $ER_y = 0 \text{ tCO}_2/\text{year}$

SDG 7 – Affordable and Clean Energy:

During current monitoring period, this project has generated 399,184 MWh affordable and clean energy.

SDG 8 : Decent Work and Economic Growth

The project provides employment to 12 people across the project sites. Also, project activity improves the quality of employment by giving training to employee. 05 trainings conducted by the project activity during the current monitoring period.

E.3. Calculation of leakage

As per the consolidated methodology ACM0002 v20, no leakage emission through the renewable project electricity generation.

Leakage (LE_y) = 0

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

SD G	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	Climate Action	373,076 tCO ₂ e	0 tCO ₂ e	373,076 tCO ₂ e
7	Affordable and Clean	0 MWh	399,184 MWh	399,184 MWh

Energy

8	Decent Work and Economic Growth	0	Total 12 people employed and 05 training conducted	Total 12 people employed and 05 training conducted
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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 ¹⁶ achieved during this monitoring period
13	712,755 ¹⁷ (475,170 ¹⁸) tCO _{2e}	373,076 tCO _{2e}
7	762,631 ¹⁹ (508,420.5 ²⁰) MWh	399,184 MWh
8	1 training/annum and employment to 10 persons	Total 12 people employed and 05 training conducted

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

SDG 13 Climate Action

As per the registered PDD, for 600 MW, the amount of CERs generated annually is 1,136,050 tCO_{2e}. Therefore, the amount of estimated ex ante for this monitoring period is identified as explained below.

The total number of days in this monitoring period is 229 days. Hence, the amount of estimated ex ante for this monitoring period = $1,136,050 \times (229/365) = 712,755$ tCO_{2e}

For 400 MW, the amount of estimated ex ante for this monitoring period is identified as explained below:

The total number of days in this monitoring period is 229 days. Hence, the amount of estimated ex ante for this monitoring period = $757,367 \times (229/365) = 475,170$ tCO_{2e}

SDG 7 : Affordable and Clean Energy

¹⁶ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

¹⁷ For 600 MW capacity

¹⁸ Corresponding to actual installed capacity 400 MW.

¹⁹ For 600 MW capacity

²⁰ Corresponding to actual installed capacity 400 MW.

The annual estimated power generation for the project activity for 600 MW is 1,215,546.76 MWh, thus considering number of days covered during present monitoring period to be 229, the estimated power generation will be 762,631 MWh.

The annual estimated power generation for the project activity for actual commissioned capacity i.e 400 MW is 810,365 MWh, thus considering number of days covered during present monitoring period to be 229, the estimated power generation will be 508,420 MWh.

SDG 8 : Decent Work and Economic Growth

The project leads to employment opportunities which would not have been possible in the baseline scenario. The project is providing employment to 12 persons. Also project activity improves the quality of employment by giving `training to employee and during this current monitoring period total 05 trainings are provided.

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

SDG 7 and SDG 13:

As per the total capacity which 600 MW, 47.66% lower generation and emission reduction achieved with respect to estimated values. The generation of electricity depends upon many other climatic conditions and non-commissioning of remaining part, which are not within the control of the project participant.

As per actual commissioned capacity which is 400 MW, it is observed that the actual emission reductions are 21.49 % lower than the estimated emission reductions.

SDG 8:

Number of training and employment figure is slight higher which is conservative.

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 are 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 continual improvement process, feedback from the associated stakeholders is vital, therefore a dedicated Visitor register cum grievance register has been placed at the project site which is accessible to stakeholders to provide their

feedback on the project. It is appropriate publicly accessible location at which local stakeholders can provide their feedback on the project. This location is also conducive to continuous and regular checks for stakeholder comments. The grievance register is being continuously monitored and addressed through the grievances cell on regular basis.

During the monitoring period no grievances have been received, the comments received are satisfactory and appreciating in nature.

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

Not Applicable as there were no negative feedback logged during the monitoring period.

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

Not Applicable

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