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)	GS5575
Title of the project (s) covered by monitoring report	20 MW Solar Project in Sanwreej, Jodhpur, Rajasthan
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	3.0
Version number of the monitoring report	4.0
Completion date of the monitoring report	27/02/2021
Date of project design certification	11/07/2017
Date of Last Annual Report	27/06/2020
Monitoring period number	02
Duration of this monitoring period	01/08/2018 to 29/02/2020 (Both days included)
Project Representative	Janardan Wind Energy 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 17.0
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
SDG 7: Affordable and Clean Energy	MWh of renewable energy generated	62,670.75	MWh
SDG 8: Decent Work and Economic Growth	Trainings Employees INR	4 Training 34 employees INR 13,486,667	Training Employees INR
SDG 13: Climate Action	Emission Reduction	61,273	CERs
SDG 3: Good Health and Well-Being	Health Camps	1	Camps

Table 2 – Product Vintages

		Amount Achieved			
Start Dates	End Dates	SDG 7 : Affordable and Clean Energy	SDG 8: Decent Work and Economic Growth	SDG 13: Climate Action(CERs)	SDG 3: Good Health and Well-Being
01/08/2018	31/12/2018	16,936 MWh	- 34 employees INR 3,570,002	16,559 tCO2	-
01/01/2019	31/12/2019	41,108 MWh	3 training 34 employees INR 8,516,668	40,191 tCO2	1 Camp
01/01/2020	29/02/2020	4,627 MWh	1 training 34 employees INR 1,399,997	4,523 tCO2	-

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The project activity is a 20 MW solar power project, promoted by Janardan Wind Energy Pvt. Ltd. (JWEPL). The purpose of the project activity is to generate clean electricity with utilization of solar energy. The project activity involves installation of 10 MWAC (Project-I) & 10 MWAC (Project-II), totaling to 20 MW_{AC} solar power project under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-II, Batch-II (DCR1 Category). Both the projects are installed in the same project boundary at Village: Sanwreej, Tehsil: Phalodi, District: Jodhpur, State: Rajasthan.

The electricity generated by the project is exported to the NTPC Vidyut Vyapar Nigam (NVVN) Ltd. The electricity generated from the project activity will be evacuated through 132 kV sub-station located at Sanwreej for consumption in the Indian Electricity Grid. The project activity therefore displaces an equivalent amount of electricity, which would have otherwise been generated by fossil fuel dominant electricity grid and there by reduces the associated CO_2 emissions.

Placements of the Purchase Orders i.e., start date of the project activity 20/07/2016. Commissioning Dates of the Project I & Project II are 30/03/2017 and 18/04/2017 respectively. The project is in continuous operation since the implementation.

The present monitoring period is from 01/08/2018 to 29/02/2020 through which emission reduction claimed is 61,273 tCO_2e.

The Emission Reductions as per the vintage break-up (2018, 2019 & 2020) in the monitoring in the following format:

01/08/2018 to 31/12/2018: 16,559 tCO_2e

01/01/2019 to 31/12/2019: 40,191 tCO_2e

01/01/2020 to 29/02/2020: 4,523 tCO_2e

The other activities are also done by the PP during the monitoring period which contributed towards Good Health and Well-Being.

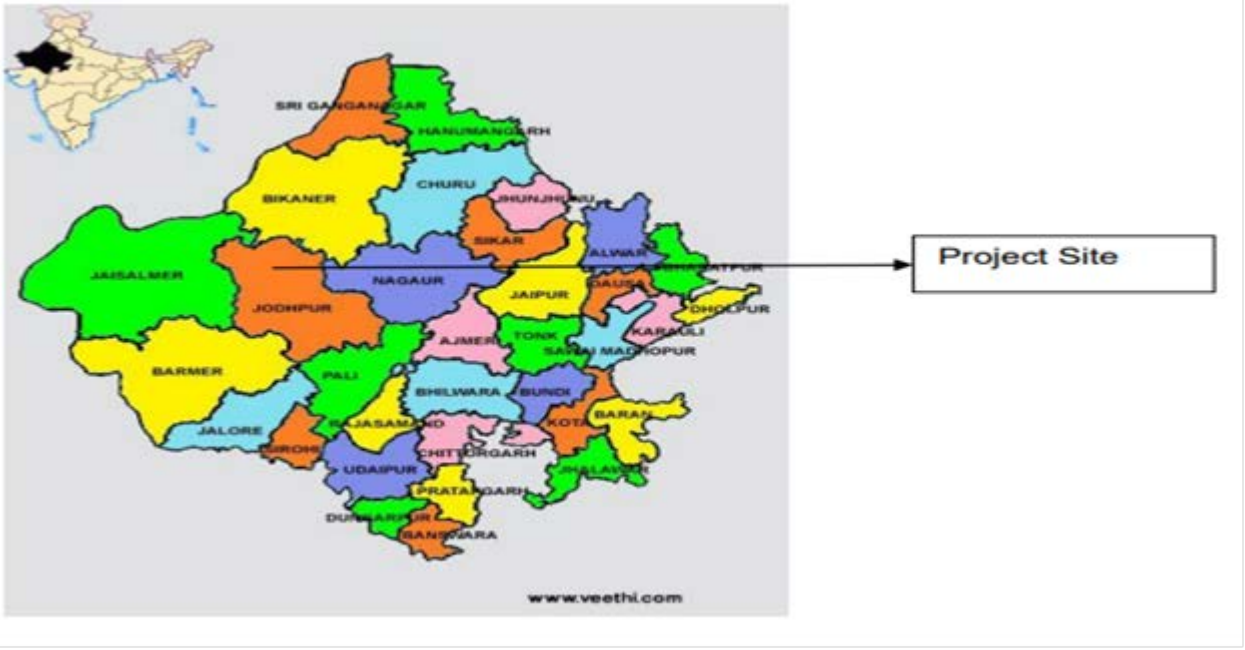
The project proponent actively takes regular feedback from local villagers about project and has also set up a grievance mechanism in place.

A.2. Location of project

JWEPL has installed solar panels at Village: Sanwreej, Tehsil: Phalodi, District: Jodhpur, State: Rajasthan., India.

Geographical coordinates are given below:

Project Investors' Name	Latitude	Longitude	Altitude of Site (m)	Part Commissioning	Date
JWEPL	26.98º N	72.25º E	265 m	(Project – I) 10 MW	30/03/2017
				(Project –II) (10 MW (Project – II)	18/04/2017



A.3. Reference of applied methodology

Title: Consolidated baseline and monitoring methodology for "Grid-connected electricity generation from renewable sources"

References: Approved consolidated baseline methodology ACM0002 "Grid-connected electricity generation from renewable sources" (Version 17.0, EB 89[1])

A.4. Crediting period of project

Type of Crediting Period	: Renewable
Start date of the crediting period	: 30/03/2017 (Retroactive crediting start date)
Length of the current crediting period	: 7 years

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

(JWEL) has implemented 20 MW solar photovoltaic technology-based power project in Village Sanwreej, Tehsil: Phalodi, District: Jodhpur, State: Rajasthan., India.

Solar power plant has run successfully during the reported monitoring period. No events or situations happened during the reported monitoring period which can alter the applicability of the

[1] http://cdm.unfccc.int/methodologies/DB/EY2CL7RTEHRC9V6YQHLAR6MJ6VEU83

applied methodology. The solar PV power plant will have solar PV modules, inverters, transformers and other protection system and supporting components as under:

The technical details of the project are given below:

A. Solar PV modules:

Module Supplier	Module Model	Capacity (p)	Number	Total Capacity (MWp)
TATA Power Solar Systems Ltd.	TP 303 series	303	19520	5.91456
	TP 306 series	306	9920	3.03552
	TP 309 series	309	19200	5.9328
	TP 312 series	312	19,360	6.04032
	TP 315 series	315	9760	3.0744
Total			77760	23.9976 MWp

B. Inverters:

S.No.	Make	10 MW (Project – I)	10 MW (Project – II)
1	Manufacturer	Sungrow Power	Sungrow Power
2	Model	SG2500	SG2500
3	Rated Capacity	2500 kVA	2500 kVA
4	No. of Inverters	4	4
5	Rated Input Voltage (Max.Input Voltage)	1000V	1000V

C. Transformers:

S.No.	Make	10 MW (Project – I)	10 MW (Project – II)
1	Manufacturer	Danish Private Limited	Danish Private Limited
2	Model	Oil Cooled	Oil Cooled
3	Rated Capacity	2800KVA	2800KVA
4	No. of Transformers	4	4
5	Rated Input Voltage	33 KV/360V	33 KV/360V

D. Metering Equipment Details

S.No.	Make	10 MW (Project – I)	10 MW (Project – II)
1	Manufacturer	Secure Make	Secure Make
2	Type	ABT meters	ABT meters
3	Accuracy Level	0.2S	0.2S
4	Total no of meter (Site and Substation)	4	4

B.2. Post-Design Certification changes

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 is one correction to the project information identified during the current monitoring period. The value of the parameter $EF_{grid,BM,y}$ under section 6.2 of the registered PDD was mentioned 0.9258 tCO_2e/MWh which is a typographical error as under registered PDD section 6.1, "Step 5: Calculate the build margin (BM) emission factor" the value of the parameter $EF_{grid,BM,y}$ was determined as 0.9285 tCO_2e/MWh and the same value was used in the calculation of Combined Margin emission factor. in the registered PDD. Hence, PP has corrected the same information to maintain the consistency in reporting the value of parameter $EF_{grid,BM,y}$ throughout the PDD.

B.2.3. Changes to start date of crediting period

There have not been any changes to 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 a change to the project design has happened and in line with the para 241 (a) of the CDM Project standard version 2. PP has been reported the same below during this monitoring period under this crediting period.

"The number of PV module for the model TP 312 series & TP 315 Series were reported 16,960 and 7,360 in the registered PDD but actual number of PV module commissioned for the model TP 312 series & TP 315 Series are 19,360 and 9,760 respectively. Thus, the total number of PV modules reported in the registered PDD was 72,960 but the number of actual commissioned PV modules are 77,760. Due to this change, the project DC capacity has been changed to 23.9976 MWp from 22.4928 MWp reported in the registered PDD.

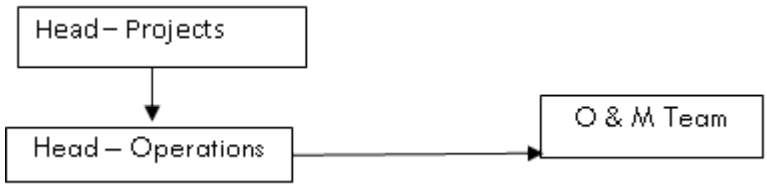
However, the change in the total number of modules does not alter the AC installation capacity of project which is 20 MWAC. There is no change in the Project overall output inverter capacity mentioned in the registered PDD.

The reason for the change is to meet contracted capacity, as per PPA section 4.4 "Right to Contracted Capacity & Energy", PP has to inject 41.18 MU at the max, if not injected the electricity in the contracted capacity range then PP shall be penalized as per the PPA clause. So, to account the losses, CUF and grid availability, NOs of PV modules has been increased to ensure the reliability of supplying the Contracted Capacity & Energy as per PPA.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The monitoring plan is being devised as per approved methodology ACM0002 “Grid-connected electricity generation from renewable sources” Version 17.0 and as per the modalities and procedures for CDM project activities and is proposed for grid-connected solar power projects being implemented in Rajasthan, India.

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



Responsibilities of Head- Projects: Tracking and reviewing the overall functioning and maintenance of the project activity from Head (Operations). Head (Operations) will be reporting Head (Projects).

Responsibilities of Head – Operations: Overall functioning of the project activity and Coordinating with the O & M Team for the proper functioning of Project activity. He will be reporting to Head (Projects).

Responsibilities of O & M Team: O & M team is responsible for Operations and Maintenance related issues, they are also responsible for day-to-day data collection and monitoring, ensures completeness and reliability of data (calibration of equipment).

Data Measurement

Projects activity comprises of installation of 4 Energy meters, 2 Energy meters (1 main meter and 1 check meter for each 10 MW) at project site and 2 Energy meters (1 main meter and 1 check meter for each 10 MW) at substation.

The export and import energy were measured using Main & Check meters installed at Sub-station. Authorized officer of NVVN in the presence of representative of PP took Export & Import readings of Main & Check meters on monthly basis. The meter reading was taken jointly and signed by the representatives of the NVVN and PP. Based on the readings, invoices/ monthly bills was raised by PP. These invoices and monthly bills are used for cross checking the meter readings taken for the respective project activity.

The Project representatives are available during meter reading, the calculations of net electricity supplied to grid is completely under purview of (SEB/DISCOM officer) NTPC Vidyut Vyapar Nigam Ltd. In addition, accuracy class of meters and calibration frequency is under purview of SEB/DISCOM officer 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.

Data collection and archiving

Export & Import readings from main & check meter are collected under the supervision-authorized representatives of PP. The net electricity supplied to grid are calculated based on export & import readings. 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 CERs for the project activity whichever occurs later.

Both the main and check meter of both the project I &II are found within the acceptable limits of accuracy functioning properly.

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 CO2 Emission Factor in year y
Source of data	Central Electricity Authority: "CO_2 Emission Database
Value(s) applied)	CEA CO_2 Baseline database Version 11" published by Central Electricity Authority (CEA), Ministry of Power, Government of India.
Choice of data or measurement methods and procedures	http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.pdf
Purpose of data	0.9941
Additional comments	Operating Margin Emission Factor has been calculated by the Central Electricity Authority using the Simple OM approach in accordance with the procedures prescribed in the approved "Tool to calculate the emission factor for an electricity system" Version 5.0

Data / parameter:	$EF_{grid,BM,y}$
Unit	tCO_2e/MWh
Description	Build Margin CO2 Emission Factor in year y
Source of data	Central Electricity Authority: "CO_2 Emission Database CEA CO_2 Baseline database Version 11" published by Central Electricity Authority (CEA), Ministry of Power, Government of India. http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.pdf
Value(s) applied)	0.9285
Choice of data or measurement methods and procedures	Build Margin Emission Factor has been calculated by the Central Electricity Authority with the approved "Tool to calculate the emission factor for an electricity system". Version 5.0

Purpose of data	The data is used to calculate baseline emission reductions.
Additional comments	The Build Margin would be calculated ex ante and fixed during the crediting period. For ex ante calculation the most recent data (2014-15) available has been used.

Data / parameter:	$EF_{grid, CM, y}$
Unit	tCO_2e/MWh
Description	Combined Margin CO2 Emission Factor in year y
Source of data	Central Electricity Authority: "CO_2 Emission Database CEA CO_2 Baseline database Version 11" published by Central Electricity Authority (CEA), Ministry of Power, Government of India. http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.Pdf
Value(s) applied)	0.9777 (calculated)
Choice of data or measurement methods and procedures	Combined Margin Emission Factor has been calculated with the approved "Tool to calculate the emission factor for an electricity system" Version 5.0 as weighted average of 75% of OM (three years average) and 25% of BM for the latest year.
Purpose of data	The data is used to calculate baseline emission reductions.
Additional comments	-

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

Data / parameter:	$EG_{facility,y}$
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated/default	Calculated (based on the measured values of electricity exported and imported)
Source of data	Monthly Meter Reading Reports (separately for each individual 10 MW (Project-I and Project-II)
Value(s) of monitored parameter	62,670.75 MWh

<table>
<tr><td>Monitoring equipment</td><td>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 NVVN as per below equation:

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

As per the registered PDD, calibration of meters is under the control of State Utility and frequency of calibration is not within the control of PP. However, as the PDD the PP shall ensure at least once in five-year calibration as per the national standard. During the monitoring period, the meters have been calibrated and there has been no error or fault in the meters identified during the latest calibration as well.
Below are the details of meter numbers and calibration dates:

<table>
<tr><td colspan="3">Energy Meter Serial No Details</td><td>Calibration Date</td></tr>
<tr><td rowspan="4">132 KV GSS Billing Meter (Project-I)</td><td>Main Meter (Plant End)</td><td>RJB90188</td><td>19/05/2018</td></tr>
<tr><td>Check Meter (Plant End)</td><td>RJB90189</td><td>19/05/2018</td></tr>
<tr><td>Main Meter (GSS End)</td><td>RJB90190</td><td>19/05/2018</td></tr>
<tr><td>Check Meter (GSS End)</td><td>RJB90191</td><td>19/05/2018</td></tr>
<tr><td rowspan="4">132 KV GSS Billing Meter (Project-II)</td><td>Main Meter (Plant End)</td><td>RJB90193</td><td>19/05/2018</td></tr>
<tr><td>Check Meter (Plant End)</td><td>RJB90194</td><td>19/05/2018</td></tr>
<tr><td>Main Meter (GSS End)</td><td>RJB90195</td><td>19/05/2018</td></tr>
<tr><td>Check Meter (GSS End)</td><td>RJB90196</td><td>19/05/2018</td></tr>
</table>
*All the meters are of “Secure Make: with 0.2s Accuracy class.</td></tr>
<tr><td>Measuring/reading / recording frequency:</td><td>Measuring Frequency: Continuous
Frequency of Recording: Monthly</td></tr>
<tr><td>Calculation method (if applicable):</td><td>Net Electricity is calculated difference between export & import that is measured by energy meter.</td></tr>
<tr><td>QA/QC procedures:</td><td>The net electricity is crosschecked with the invoice copies.</td></tr>
<tr><td>Purpose of data:</td><td>Calculation of baseline emission</td></tr>
<tr><td>Additional comments:</td><td>Calibration of all the meters will be undertaken once in 5 years as per CEA guidelines.</td></tr>
</table>

Relevant SDG Indicator 13.2: Integrate climate change measures into national policies, strategies and planning

Data / parameter:	Air quality
Unit	CO_2 emission reduction and reduction in dust generation
Description	In order to reduce dust emissions during the construction phase, the following dust suppression measures stipulated and implemented: • Spraying water and covering material trucks' body to minimize dust; • Reuse of water for sprinkling of unpaved roads. • Imposition of speed controls for vehicles and unpaved site roads;
Measured/calculated/default	Calculated
Source of data	Central Electricity Authority: "CO_2 Emission Database CEA CO_2 Baseline database Version 11" published by Central Electricity Authority (CEA), Ministry of Power, Government of India. http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11. Pdf
Value(s) of monitored parameter	61,273 tCO2 emission reductions achieved during the reported monitoring period. The applied OM & BM for the project are as following: Operating Margin: 0.9941 tCO2/MWh Build Margin: 0.9285 tCO2/MWh The applied Combined margin for the project activity is 0.9777 tCO2/MWh. This high emission factor signifies the fact that the electricity being fed in the Indian grid (earlier NEWNE) is highly carbon intensive. Every MWh of electricity generated by the project activity prevents further emissions. During Commissioning phase, dust generation was controlled through strict practice of control measures at site, which includes no soil piles, open trucks, controlled vehicle speed. It also includes sprinkling of water if required. The current monitoring period there has been no activity of excavation or road pavements the project makes positive impact on this parameter. It resulted in emission reductions hence is helping in climate change mitigation.
Monitoring equipment	Project logbook, O&M policy and interview with O&M team. The interview with the O&M team revealed that the project operation has minimalistic ground activities which does not result in any dust emissions.
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	-
QA/QC procedures:	Project logbook, O&M policy and interview with O&M team. The interview with the O&M team revealed that the project operation has minimalistic ground activities which does not result in any dust emissions.
Purpose of data:	**Baseline situation of parameter** According to latest CEA official data CO2 emissions due to electricity generation in India is 0.9777 tCO2/GWh. (This is calculated value and sources are available in the emission reduction spreadsheet.) There was no project related activity and hence no resultant dust due to construction or project's vehicle movements. **Future target for parameter** Continuation of strict control measures for prevention of dust generation. Optimal operation of solar power project to generate clean energy and associated emission reductions.

Additional comments:	-

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.

Data/parameter:	Quality of employment
Unit	Number of Trainings provided to employees & O&M staffs
Description	Trainings provided to employees by O&M staff
Measured/calculated/default	Measured
Source of data	Training Records & Employee feedback forms
Value(s) of monitored parameter	4 Trainings & workshops conducted to the employees are:

S. No.	Name of Trainings	Date of Training
1	Operation and maintenance Training of Inverter (12 Persons participated)	12/06/2019
2.	Operation & Maintenance Training of HT Panels (11 Persons participated)	06/08/2019
3	Operation & Maintenance Training of Transformer (09 persons participated)	10/11/2019
4	How to use the equipments of safety purpose like Fire Extinguisher, Fire Bucket, Safety Belt etc. (19 Person Participated)	07/01/2020

Monitoring equipment	The O&M personnel observes and take records in Training Records once in a year; there is no equipment to monitor it.
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	Manually by O & M Contractor
QA/QC procedures:	Transparent data collection, analysis and reporting is done to identify and record the no. of trainings provided to the employees as well as employment generated due to project activity.
Purpose of data :	Continuation of regular trainings/workshops for employees & O&M staffs
Additional comments:	The records of training & workshops have been submitted to the assessment team. The training programmes help in making the workforce efficient and skilled at their job. This not only helps the company but also adds to growth of individual employees. Thus, the project has a positive impact on the parameter.

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

Data/parameter:	Quantitative employment and income generation
Unit	1. Number of employees involved in the project 2. INR for Cost spent for O&M
Description	Number of people employed directly due to the project activity

Measured/calculated/default	Measured
Source of data	Plant employment records
Value(s) of monitored parameter	1. Total employees are 34. Out of which 6 are non-local and rest are local. 6 are permanent and 28 are on contract basis. 2. INR 13,486,667 for the Monitoring Period.
Monitoring equipment	The IBC Solar PPL personnel keep the records in the employees register and records once in a year; there is no equipment to monitor it.
Measuring/reading /recording frequency:	Annually
Calculation method (if applicable):	Manually by O & M Contractor
QA/QC procedures:	The number of persons employed would be mentioned in the plant register, which can be crossed checked with daily attendance register.
Purpose of data :	To monitor the contribution to SDG 8
Additional comments:	The record of Number of employees involved in the project has been submitted to the assessment team.

SDG 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

Data/parameter:	Health Camps, Knowledge and information dissemination regarding natural disasters.
Unit	Total number of beneficiaries of the initiatives undertaken by the Project Developer to enhance the human and institutional capacity of the local stakeholders.
Description	The Project Developer has focused on projects leading to improvement of basic education, health, improve quality of life and basic infrastructural improvement projects to facilitate human and institutional capacity development.
Measured/calculated/default	Measured
Source of data	Photographs, cheques, donation receipts, CSR reports and other supportive documentation on reporting as provided.
Value(s) of monitored parameter	Activity Conducted during this monitoring period. 15/08/2019 – Conducted Health & Hygiene awareness program to promote healthy life education & Sweet distribution program in Govt School.
Monitoring equipment	NA
Measuring/reading /recording frequency:	Once in the monitoring period
Calculation method (if applicable):	-
QA/QC procedures:	-

Purpose of data :	To monitor the contribution to SDG 3 (Ensure healthy lives and promote well-being for all at all ages)
Additional comments:	-

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

Data / Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
Net Generation ($EG_{facility,y}$)	62,670.75 MWh	51,960 MWh
Air quality	61,273 tCO2	50,801 tCO2
Quality of employment	4 Trainings	4 Trainings
Quantitative employment and income generation	34 employees INR 13,486,667	34 employees INR 11,188,333
Health Camps	01	0

D.4. Implementation of sampling plan

No sampling process is involved, hence not applicable. The details of sampling any of carried out during the course of verification will be included.

SECTION E. CALCULATION OF SDG IMPACTS

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

In the baseline, there were no Social Development activities taking place; whereas baseline Emissions for electricity supplied by project activity, BE_y is calculated as:

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

Where,

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

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

$EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO_2/MWh)

Thus, the estimated baseline situation of each SDG outcome is summarized as follows;

Item	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 61,273 tCO2

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

The company conducts regular surveys during construction as well as O&M phases in the villages near project locations to check the requirement of facilities by the villages. Based on the surveys, PP identifies and works on several scope(s) of developmental activities such distribution of projector in Rajkiya Uchch Prathmik Vidyalaya, providing employment and training the employees. Apart from these activities, some or all of which will be conducted in any given year, following SDGs will be impacted every year.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Method: Monitored through energy meter. Net electricity will be calculated by DISCOM and O&M operator on monthly basis and provided in the share certificate. Frequency: Monthly QA/QC procedures: Net electricity supplied to the grid by the project activity will be cross checked with invoices submitted to EB. The meter(s) shall be calibrated on a regular basis. Purpose: To measure the electricity produced and supplied to the grid SDG.
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Method: Ongoing data collection and storage under HSE records Frequency: Annually Purpose: To identify and record the number of trainings provided to the employees as well as employment generated due to project activity.
SDG 13: Take urgent action to combat climate change and its impacts	Method: Monitored through energy meter. Net electricity will be calculated by DISCOM and O&M operator on monthly basis and provided in the share certificate. Further, the emission factor is calculated using “Tool to calculate the emission factor for an electricity system”, v5 and referencing data from CEA database v11. Frequency: Every monitoring period Purpose: To calculate emissions avoided due to the project activity

E.3. Calculation of leakage

As per applied methodology ACM0002, version 17 Leakage emissions are not considered for the project activity.

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	62,670.75	62,670.75
8	Decent Work and Economic Growth	0	4 training INR 13,486,667 34 Employees	4 training INR 13,486,667 34 Employees
13	Climate Action (tCO2)	61,273	0	61,273
3	Good Health and Well-Being	0	1	1

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[2] achieved during this monitoring period
7	35,678 MWh/Year (365 days) 29,813.12 MWh for the Monitoring period (578 days)	62,670.75 MWh
8	1 Training 37 employees	4 Trainings INR 13,486,667 34 employees
13	34,882 tCO_2 /Year 55,238 tCO_2 for the monitoring period (578 days)	61,273 tCO_2

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

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 55,238 tCO_2e

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

= 34,882*578(days)/365

= 55,238 tCO_2e

whereas actual emission reductions achieved are 61,273 tCO_2e, which is approximately 10.93% higher than the estimated emission reductions.

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

The actual emission reductions achieved during the current monitoring period is 61,273 tCO_2e which is 10.93% slightly more than the estimated emission reduction. This means that the actual annualized PLF achieved during the current monitoring period is 22.59% which is little higher than the expected PLF considered in the registered PDD which is 20.53%. The variation in actual & estimated PLF is 10% only which is within the +/-10% range of sensitivity analysis. 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.

SECTION F. SAFEGUARDS REPORTING

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Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	As per Gold Standard Gender Policy, para 13 (i) "Foundational gender-sensitive requirement - This strengthens Gold Standard's 'do no harm' approach and addresses safeguards to prevent or mitigate adverse impacts on women or men and girls and boys. Such action is mandatory for all projects seeking Gold Standard certification and includes compliance with the gender 'do no harm' safeguards, gender gap analysis and gender sensitive stakeholder consultations." The project being a renewable energy project is not gender sensitive project. The project does not adversely impact women or men.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	India is party to "Convention on the Elimination of All Forms of Discrimination against Women" and the project has aligned its policies which does not discriminate on gender.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	The project will not employ any personnel based on gender, race, religion, sexual orientation or any other basis. The Project was not designed to increase women´s workload nor add care responsibilities. The Project will not limit women´s ability regarding natural resources. The project being solar power project thus does not have any

	major impact on natural resources of the region. The Project will not expose women and girls to further risks or hazards. The project proponent has a grievance cell which would look into complaints. The Project will not restrict women´s rights or access regarding natural resources.
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	Yes, the project applies the stakeholder-related procedures. From the GS Stakeholder guidelines, section 1.4 "In developing a Project, taking gender issues into account would require that local stakeholder consultation processes reach a wide range of community representatives in ways that ensure equal and effective participation of women and men in consultation, and that gender issues are fully factored into comprehensive social and environmental impact assessments." The Local Stakeholder Consultation Meeting had an overall healthy participation from women in the meeting. The meeting was held on not to interfere with the regular schedule of the week. It was held during the day, as women tend to circulate more freely and safely than after sunset. All the villagers were invited for the consultation through News Paper Advertisement & invitation pasted in Gram Panchayat (local administration) Office. The meeting was conducted in local language.

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.

No grievances received.

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

No grievances received in the previous monitoring period, thus no follow up required.

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

Not legal contest or dispute that has arisen with the project during the monitoring period.

ANNEX 1 – CSR Activity – Supporting Evidence

Conducted Health & Hygiene awareness program to promote healthy life education & Sweet distribution program in Govt School (Date - 15/08/2019)

Location - Sanwrej, Tehsil – Phalodi, District: Jodhpur, Rajasthan

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