Gold standard for the global goals
Monitoring report

June 2017, version 1

Title of the project	**20 MW Solar Project in Sanwreej, Jodhpur, Rajasthan**
Gold Standard project id	GS5575
Version number of the monitoring report	03~~2~~
Completion date of the monitoring report	~~09~~03~~11~~/0~~1~~2/201~~98~~
Date of project design certification	11/07/2017
Start date of crediting period	30~~01~~/03~~4~~/2017
Duration of this monitoring period	30/03/2017 to 31/07/2018 (Both days included)
Duration of previous monitoring period	NA
Project representative(s)	Janardan Wind Energy Pvt. Ltd.
Host Country	India
Certification pathway (activity certification/impact certification)	Activity Certification
SDG Contributions targeted (as per approved PDD)	1 - SDG 7 Affordable and Clean Energy 2 - SDG 8 Decent Work and Economic Growth 3 - SDG 13 Climate Action
Gold Standard statement/product certification sought (GSVER/ADALYs/RECs etc.)	GS VERs
Selected methodology(ies)	ACM0002 "Grid-connected electricity generation from renewable sources" Version 17.0
Estimated amount of annual average certified SDG impact (as per approved PDD)	1. – SDG 7 : 35,678 MWh/year : 47,798 MWh for the Monitoring Period 2. –SDG 8 : 1 training ~~: INR 2,100,000 /quarter~~ :37 employees 3. –SDG 13 : 34,882 tCO2/year :46,732 tCO2 for the Monitoring Period
Total amount of certified SDG impact (as per approved methodology) achieved in this monitoring period	1. –SDG 7 : 51,960 MWh for the Monitoring Period 2. –SDG 8 : 4 training :INR ~~11,188,333~~7,200,000 for the Monitoring Period :34 labours and staff 3. –SDG 13 : 50,801 tCO2

SECTION A. Description of project

A.1. Purpose and 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 MWAC(corresponding to 22.5 MWp) 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, Teshil: Phalodi, Disrtict: 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 CO2 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. There were no Post registration identified for the present monitoring period.
The present monitoring period is from 30/03/2017 to 31/07/2018 through which emission reduction claimed is **50,801** tCO2e.

The Emission Reductions as per the vintage break-up (2017 & 2018) in the monitoring in the following format:
30/03/2017 to 31/12/2017: 26,472 **tCO2e**
01/01/2018 to 31/07/2018: 24,329 **tCO2e**

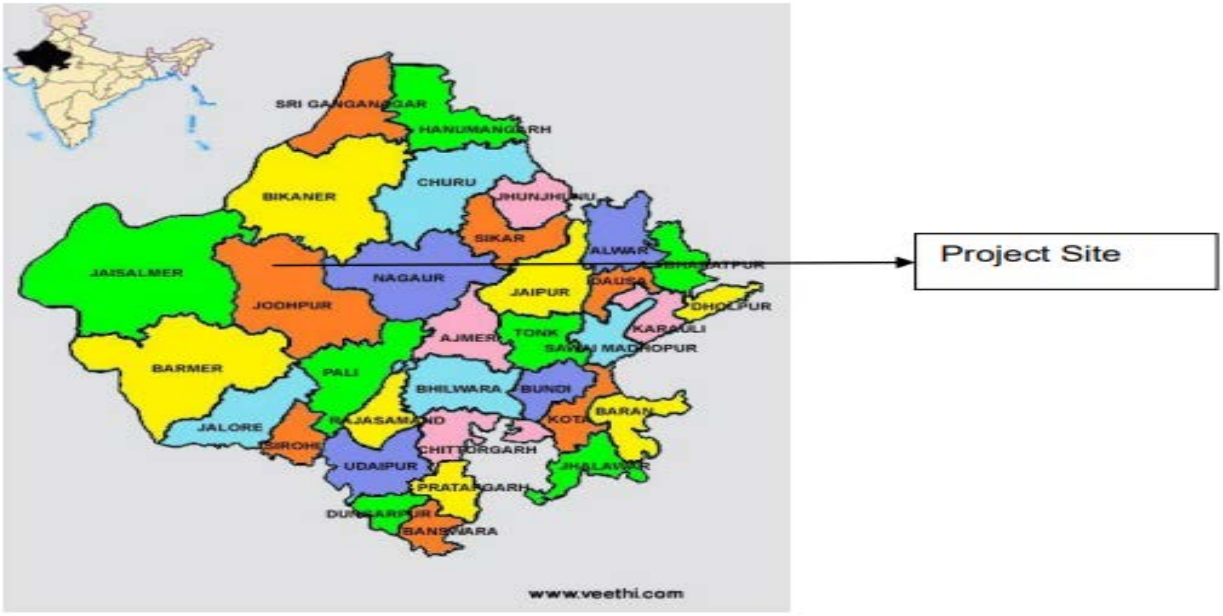
The other activities done by the PP during the monitoring period is distribution of a projector in a higher secondary school of Nayi Mangloyi dated 17 July 2017 which contributed towards Good Health and Well-Being.
The project proponent actively takes regular feedback from local villagers about project and has also set up a grievance mechanism in place.

A.2. Location of project

>> JWEPL has installed solar panels at Village: Sanwreej, Teshil: Phalodi, Disrtict: Jodhpur, State: Rajasthan., India.

Geographical coordinates are given below:

Project Investors' Name	Latitude	Longitude	Altitude of Site (m)	Part Commissioning	Date
JWEPL	26.98^0 N	72.25^0 E	265 m	(Project – I) 10 MW	30-Mar-2017
				(Project –II) (10 MW (Project – II)	18-Apr-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, Teshil: Phalodi, Disrtict: Jodhpur, State: Rajasthan., India.

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

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

TATA Power Solar Systems Ltd.	TP 303 series	303	19520	5.91456
	TP 306series	306	9920	3.03552
	TP 312series	312	9600	2.9952
	TP 309series	309	19200	5.9328
	TP 312series	312	9760	3.0451
	TP 315series	315	9760	3.0741
TOTAL CAPACITY				22.4928

B. Inverters:

S.No.	Make	10 MW (Project – I)	10 MW (Project – II)
1	Manufacturer	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-registration changes

B.2.1. Temporary deviations from Certified Key Project Information, Project Design Document, Monitoring & Reporting Plan, applied methodology or applied standardized baseline

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

B.2.2. Corrections

>> There are corrections to project information fixed at validation during the current monitoring period. During project conception phase, the total 72,960 No. of Module was planned to achieve 20 MW AC capacity. However, actually 77,760 No. of Module have been commissioned to achieve 20 MW AC. The corrections can be seen in the section B.1 "Description of implemented project"

B.2.3. Changes to start date of crediting period

>> There has not been any changes to start date of crediting period.

B.2.4. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

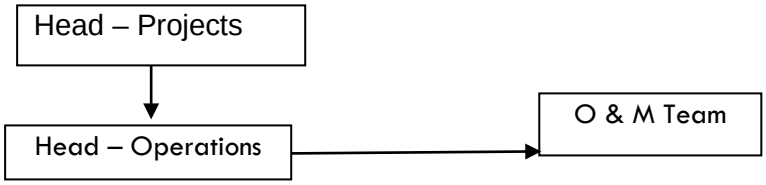
>> Monitoring plan is already included, in the registered PDD. No change from registered monitoring plan, applied methodology or applied standardized baseline

B.2.5. Changes to project design of approved project

>> The technical specification of the project will change from the registered PD as during project conception phase, the total 72,960 No. of Module was planned to achieve 20 MW AC capacity. However, actually 77,760 No. of Module have been commissioned to achieve 20 MW AC.

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 was 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	SDG13 : Climate Action
Data/parameter:	$EF_{OM, y}$
Unit	tCO2e/MWh
Description	Operating Margin Emission Factor of INDIAN Grid
Source of data	Central Electricity Authority: "CO2 Emission Database
Value(s) applied)	CEA CO2 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"

Relevant SDG Indicator	**SDG13 : Climate Action**
Data/parameter:	$EF_{BM, y}$
Unit	tCO2e/MWh
Description	Build Margin Emission Factor of INDIAN Grid
Source of data	Central Electricity Authority: "CO2 Emission Database CEA CO2 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".
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.

Relevant SDG Indicator	**SDG13 : Climate Action**
Data/parameter:	$EF_{CM, y}$
Unit	tCO2e/MWh
Description	Combined Margin Emission Factor of INDIAN Grid
Source of data	Central Electricity Authority: "CO2 Emission Database CEA CO2 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" 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

(Copy this table for each piece of data and parameter)

Relevant SDG Indicator	**SDG 7 :** Access to affordable and clean energy services
Data/parameter:	$EG_{facility,y}$
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid
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	51,960 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-I)</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	**SDG 13: Climate Action**
Data/parameter:	Air quality
Unit	CO2 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: "CO2 Emission Database CEA CO2 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	50,801 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:	-

<table>
<tr><td>Relevant SDG Indicator</td><td>SDG 8: Decent Work and Economic Growth</td></tr>
<tr><td>Data/parameter:</td><td>Quality of employment</td></tr>
<tr><td>Unit</td><td>Number of Trainings provided to employees & O&M staffs</td></tr>
<tr><td>Description</td><td>Trainings provided to employees by O&M staff</td></tr>
<tr><td>Measured/calculated/default</td><td>Measured</td></tr>
<tr><td>Source of data</td><td>Training Records & Employee feedback forms</td></tr>
<tr><td>Value(s) of monitored parameter</td><td>4 Trainings & workshops conducted to the employees are:
<table>
<tr><td>S. No.</td><td>Name of Trainings</td><td>Date of Training</td></tr>
<tr><td>1</td><td>Operation and maintenance of Inverter</td><td>10/08/2017</td></tr>
<tr><td>2</td><td>Operation and maintenance of Transformer</td><td>15/12/2017</td></tr>
<tr><td>3</td><td>Operation and maintenance of HT Panel</td><td>05/03/2018</td></tr>
<tr><td>4</td><td>How to use the equipments of safety purpose like Fire Extinguisher, Fire Bucket, Safety Belt etc.</td><td>20/07/2018</td></tr>
</table></td></tr>
<tr><td>Monitoring equipment</td><td>The O&M personnel observes and take records in Training Records once in a year; there is no equipment to monitor it.</td></tr>
<tr><td>Measuring/reading/recording frequency:</td><td>Annually</td></tr>
<tr><td>Calculation method (if applicable):</td><td>Manually by O & M Contractor</td></tr>
<tr><td>QA/QC procedures:</td><td>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.</td></tr>
<tr><td>Purpose of data :</td><td>Continuation of regular trainings/workshops for employees & O&M staffs</td></tr>
<tr><td>Additional comments:</td><td>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.</td></tr>
</table>

Relevant SDG Indicator	**SDG 8: Decent Work and Economic Growth**
Data/parameter:	Quantitative employment and income generation
Unit	1. Number of employees involved in the project 2. ~~INR for Cost spent for O&M~~ Income generation –Rupees (INR)
Description	Number of people employed directly due to the project activity and the income provided to them during this monitoring period.
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 7,200,000~~11,188,333~~ spent as the salary paid to the employees of the project activity ~~for~~ in ~~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.

Relevant SDG Indicator	**SDG 8: Human and Institutional Capacity**
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	0
Monitoring equipment	Record Book
Measuring/reading/recording frequency:	As and when Health Camps will be conducted, the site In charge will record the same.
Calculation method (if applicable):	It is not calculated value but to be taken from the Record Book.
QA/QC procedures:	-
Purpose of data :	To monitor the contribution to SDG 8 (Ensure healthy lives and promote well-being for all at all ages)
Additional comments:	During the implementation phase, the PD has planned to conduct health or vaccination camp in the project site; however, during this monitoring period PD focused on other CSR activities~~SDGs~~. In future, whenever the PD will conduct health camps in the project site, it will be recorded and monitored.~~In future, PD will surely conduct health camps in the project site.~~

D.3. 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 outcomes

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

>> 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 (tCO2/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 CO2 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" (tCO2/MWh)

Thus the estimated baseline situation of each SDG outcome are summarised as follows:

Item	Baseline estimate
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 50,801 tCO2

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

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 net benefits as difference of baseline and project values or direct calculation for each SDG outcome

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Item	Baseline Value	Project Value	Net benefit
SDG 7: Affordable and Clean Energy	0	51960 MWh	519601 MWh
SDG 8: Decent Work and Economic Growth	0	• 4 Trainings • INR 11,188,3337,200,000 for the Monitoring Period • 0 Health camp • 34 Staff	• 4 Trainings • INR 7,200,00011,188,333 for the Monitoring Period • 0 Health camp • 034 Staff
SDG 13: Climate Action	50,801 tCO2 No impact on aesthetics	0 tCO2 No impact on aesthetics	50,801 tCO2 No impact on aesthetics

E.4. Summary of ex-post values of each SDG outcome for the current monitoring period

Item	Baseline estimate	Project estimate	Net benefit
SDG 7: Affordable and Clean Energy	0 MWh	47,798 MWh	51960 MWh
SDG 8: Decent Work and Economic Growth	0	• 41 Trainings • INR 11,188,333 for the Monitoring PeriodIncome generation • Health camps • 374 Staff	• 4 Trainings • INR 7,200,00011,188,333 for the Monitoring Period • 0 Health Camp • 34 Staff
SDG 13: Climate Action	50,801 tCO2 No impact on aesthetics	0 tCO2 No impact on aesthetics	50,801 tCO2 No impact on aesthetics

E.5. Comparison of actual value of outcomes with estimates in approved PDD

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 7: Affordable and Clean Energy	47,798 MWh	51960 MWh
SDG 8: Decent Work and Economic Growth	• 1 Trainings • Income generation • Health camps • 37 Staff ~~1 Training~~ ~~INR 11,188,333 for the Monitoring Period~~	• 4 Trainings • INR 7,200,000 for the Monitoring Period 0 Health Camp ~~INR 11,188,333 for the Monitoring Period~~ • 34 Staff
SDG 13: Climate Action	46,732 tCO2 No impact on aesthetics	50,801 tCO2 No impact on aesthetics

E.6. Remarks on difference from estimated value in approved PDD

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 7: Affordable and Clean Energy	47,798 MWh	51960 MWh
SDG 8: Decent Work and Economic Growth	• 1 Trainings • Income generation • Health camps • 37 Staff ~~1 Training~~ ~~INR 11,188,333 for the Monitoring Period~~	~~4 Trainings~~ • ~~INR 11,188,333 for the Monitoring Period34 Staff~~4 Trainings • INR 7,200,000 for the Monitoring Period • 0 Health Camp • 34 Staff
SDG 13: Climate Action	46,732 tCO2 No impact on aesthetics	50,801 tCO2 No impact on aesthetics

The actual achieved emission reduction for this monitoring period is 8.71% more than estimated value in the PDD as the generation depends on the solar conditions. Also it does not have a material impact on the additionality.

SECTION F. Stakeholder inputs and legal disputes

F.1. List all inputs/grievances which have been received for the project during the monitoring period together with their respective answers/actions

>> No complaint or any ~~grievances has~~grievances have received from the stakeholders of the project activity for this monitoring period.

F.2. List all inputs/grievances from previous monitoring period where follow up action is to be verified in this monitoring period

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

F.3. Provide details of any legal contest or dispute 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.