

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

Section A - Description of project

Section B - Implementation of project

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KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS7071
Title of the project (s) covered by monitoring report	400 MW Solar Power Project at Bhadla, Rajasthan
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	07
Version number of the monitoring report	05
Completion date of the monitoring report	22/04/2025
Date of project design certification	10/04/2020
Date of Last Annual Report	17/10/2022
Monitoring period number	6 th
Duration of this monitoring period	01/04/2023 to 31/12/2023 (Inclusive of both the dates)
Project Representative	Adani Green Energy Limited
Host Country	India
Activity Requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A

Product Requirements applied	ACM0002- Grid-connected electricity generation from renewable sources - Version 20.0
	☒ 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	696,230.94	MWh
SDG 8 Decent work and Economic growth	Employment generation	19	Employed
	Training	18	Training
SDG 13 Climate Action	Verified Emission Reductions (GS VERs)	652,220 ¹	tCO ₂ e (GS VERs)

Table 2 – Product Vintages

		Amount Achieved
Start Dates	End Dates	VERs
01/04/2023	31/12/2023	652,220 ²

¹ At the time of validation, a PLF of 24% was considered. As per the Assessment Approach for Reporting Higher Ex-Post Emission Reductions, any change in variable values within a ±10% range is acceptable for sensitivity analysis—equating to an upper bound of 26.40%. During the current verification, the observed PLF is 26.44%, slightly exceeding the threshold. Therefore, the emission reductions have been capped at the upper bound of 26.40% for the monitoring period. The PD has accordingly adjusted the 0.04% difference in the revised ER sheet. The claimed emission reductions for the monitoring period from 01-Apr-2023 to 31-Dec-2023 amount to 651,477 tCO₂.

² At the time of validation, a PLF of 24% was considered. As per the Assessment Approach for Reporting Higher Ex-Post Emission Reductions, any change in variable values within a ±10% range is acceptable for sensitivity analysis—equating to an upper bound of 26.40%. During the current verification, the observed PLF is 26.44%, slightly exceeding the threshold. Therefore, the emission reductions have been capped at the upper bound of 26.40% for the monitoring period. The PD has accordingly adjusted the 0.04% difference in the revised ER sheet. The claimed emission reductions for the monitoring period from 01-Apr-2023 to 31-Dec-2023 amount to 651,477 tCO₂.

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The purpose of the project activity is to generate power using renewable energy source (solar energy) and sell the power generated to the state grid. The project activity generates electricity using solar energy. The generated electricity is exported to the regional grid system, which is under the purview of the INDIAN electricity grid of India. The project activity replaces anthropogenic emissions of greenhouse gases estimated to be approximately 779,933 tCO₂ per year, thereon displacing 832,550 MWh/year amount of electricity from the generation-mix of power plants connected to the INDIAN GRID, which is mainly dominated by thermal/ fossil fuel-based power plant. The estimated emission reduction for the current monitoring period is 587,621 tCO₂. The total installed capacity of the current project activity is 400 MW which consists two different plant sites of capacity 300 MW and 100 MW, which involves operation of Solar PV Project in the state of Rajasthan in India. The project is promoted by Adani Renewable Energy DEVCO Private Limited (Earlier known as SB Energy Pvt Ltd).

Project Investor	Project Type	Project Capacity in AC	Date of Commissioning	State	Usage
Adani Solar Energy Jodhpur three private limited (earlier known as SB Energy One Private Limited)	Solar PV	100 MW	21-09-2018	Rajasthan	Sale to State Discom
		100 MW	24-09-2018		
		100 MW	24-09-2018		
		20 MW	04-10-2018		
		20 MW	04-10-2018		

Jodhpur four private limited (earlier known as SB Energy Three Private Limited)		30 MW	18-09-2018		
		30 MW	18-09-2018		

The project activity is a new facility (Greenfield) and the purpose of the project activity is to generate energy electricity by the utilization of renewable solar energy and further selling the generated energy to the Indian Grid. In this process, there is no consumption of any fossil fuel and hence the project does not lead to any greenhouse gas emissions. Thus, electricity is generated through sustainable means without causing any negative impact on the environment. The project participant confirms that VERs for the same vintage cannot be claimed under any standard other than GS. The project was initially registered with VCS but was later deregistered from Verra and re-applied under GS after commissioning. The deregistration certificate is available on the Verra project page³. Therefore, there is no issue of double counting in this project activity.

As per prior consideration guideline, the major Milestone of Project activity are as below:

1. Board decision taken to implement the project activity on 01/09/2017
2. The erection and commissioning agreement for Solar project between Mahindra Susten Private Limited and SB Energy One Pvt. Ltd on 12/03/2018.
3. The erection and commissioning agreement for Solar project between Sterling & Wilson Private Limited and SB Energy One Pvt. Ltd on 12/03/2018.
4. The initial PPA is signed on 06/10/2017 between Solar Energy Corporation of India Limited and SB Energy One Private Limited.
5. The initial PPA is signed on 06/10/2017 between Solar Energy Corporation of India Limited and SB Energy Three Private Limited.
6. The project initial documents like GS4GG PDD, Cover Letter, ODA letter and Terms and conditions are submitted to GS on 06/11/2018 for preliminary review purpose.
7. Listing of GS4GG PDD on Sustain-cert done on 08/01/2019.

³ <https://registry.terra.org/app/projectDetail/VCS/1805>

In the Pre- project scenario the entire 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.

During the current monitoring period 01/04/2023 to 31/12/2023 (inclusive of both the dates), the project resulted in emission reductions of 652,220 tCO₂ and underwent continued operation other than scheduled maintenance and breakdowns. Refer Annexure 4 of this report for more details.

Vintage wise power generation during the entire Monitoring Period are as follows:	Amount in MWh
Period	
01/04/2023 to 31/12/2023	696,230.94

Vintage wise emission reduction during the entire Monitoring Period are as follows:	Amount in tCO₂
Period	
01/04/2023 to 31/12/2023	652,220

Monitoring History of the project Activity:

Monitoring period (MP)	Amount in tCO ₂
MP1 (01/01/2019 to 31/08/2019)	608,592
MP 2 (01/09/2019 to 30/09/2020)	989,457
MP 3 (01/10/2020 to 30/09/2021)	943,156
MP 4 (01/10/2021 to 30/09/2022)	909,798
MP 5 (01/10/2022 to 31/03/2023)	430,919

A.2. Location of project

This Project activity is located in village Bhadla, District Jodhpur, Rajasthan. Details of the location of the Project Activity:

Project Investor	Project Capacity	Latitude	Longitude
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Adani Solar Energy Jodhpur three private limited (earlier known as SB Energy One Private Limited)	100 MW	27°28'23.0" N	71°59'41.0" E
	100 MW	27°29'04.6" N	71°59'15.9" E
	100 MW	27°28'18.9" N	72°00'05.4" E
Adani Solar Energy Jodhpur four private limited (earlier known as SB Energy Three Private Limited) 50+50 MW in 2 phases	20 MW	27°32'08.45" N	71°57'19.10" E
	20 MW	27°32'25.47" N	71°57'24.23" E
	30 MW	27°31'55.48" N	71°57'58.23" E
	30 MW	27°32'21.8" N	71°57'47.54" E

Both the solar plant of respective project investor is located at Bhadla region which is in Jodhpur district and the details are as follows²:

Location of the Plant	Village - Bhadla, Tehsil - Phalodi, District- Jodhpur, State-Rajasthan
Location details	Latitude: 27°29'16"N Longitude: 71°58'45"E Elevation: 180 m above MSL
Distance from District Headquarter	159 km from Jodhpur
Access by Road	Connected by Road- NH65
Access by Rail	Nearest Railway station- Phalodi: 83 km
Access by Air	Nearest Airport – Jodhpur
Telecommunication	Fairly available

² Sourced from DPR of the project activity

Land	Approximately 140ha land available for 70 MW Solar PV plant.
Climate	Annual Rainfall – 3 mm Max Temp: 50°C 13 Min Temp: -3°C Max Relative Humidity: 100 % Min Relative Humidity: 5% Wind Speed: 1.4 M/s (Min) to 5.7 M/s (Max)

The location of the project activity has been highlighted in the map shown below:



Figure: State and district Map of Rajasthan and Jodhpur



Figure: Site Location in Jodhpur



Figure: Location for 100 MW & 300 MW solar plant

A.3. Reference of applied methodology

Title : Grid-connected electricity generation from renewable sources

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 20.0³

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 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)

A.4. Crediting period of project

Start date	01/01/2019
Crediting Period	01/01/2019 to 31/12/2023
Duration	5 Years
Type	Renewable

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

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

⁵ <https://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>

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The total installed capacity of the project is 400 MW (300+100 MW), which comprises of two projects owned by Adani Solar Energy Jodhpur three private limited (earlier known as SB Energy One Private Limited) & Adani Solar Energy Jodhpur four private limited (earlier known as SB Energy Three Private Limited) in Rajasthan.

Technical specifications of 300 MW Solar PV Project by Adani Solar Energy Jodhpur Three Private Limited (Earlier known as SB Energy one Pvt. Ltd.) are as follows:

Sr. No.	Particulars	Details
1.	Capacity of the Project	100 * 3 MW
2.	Technology used	Polycrystalline
3.	Rating of Solar Modules	325 & 330 Wp
4.	Angle from horizontal at which the array is installed	20°
5.	Number of modules of each type	325 Wp - 811892 Nos. 330 Wp - 519088 Nos.
6.	Source of modules installed of each type	Jinergy solar in
7.	Number of invertors installed	32 numbers for each 100 MW plant (i.e., 32*3= 96 Numbers)
8.	Rating of invertors	3.125 MVA
9.	Date of installation of full capacity	19-09-2018

Technical specifications of 100 MW Solar PV Project by Adani Solar Energy Jodhpur Four Private Limited (Earlier known as SB Energy Three Private Limited) are as follows:

Sr. No.	Particulars	Details
1.	Capacity of the Project	50 * 2 MW =100 MW
2.	Technology used	Polycrystalline
3.	Rating of Solar Modules	325 & 330 Wp
4.	Angle from horizontal at which the array is installed	20 ⁰
5.	Number of modules of each Type	325 Wp - 186510 Nos. 330 Wp – 255761 Nos.
6.	Source of modules installed of each type	Jinergy solar in
7.	Number of invertors installed	16 numbers for each 50 MW project (i.e., 16*2=32 numbers)
8.	Rating of invertors	3.125 MVA
9.	Date of installation of full Capacity	04-10-2018

B.1.1 Forward Action Requests

FAR#1: Considering the higher realized ERs than estimated during every monitoring period, the same shall be checked and in any case of more than 10% Increase, it shall be justified with evidence by VVB. PP and VVB shall note that if PLF has increased, and the registered equity IRR reaches the benchmark, this may jeopardize the additionality of the project. In such case, the issuance will be capped at the registered PDD estimation of SDG 13 during next performance review and design change request shall be submitted to GS to ensure the validity of the project activity.

Response: During the present monitoring period, the project witnessed an increase of 10.99% in emission reductions as compared to ex-ante emissions, which is due to higher PLF achieved due to increased solar radiation and is thus nature dependent and not in control of PP. Further no design change in the project activity has taken place and even with an increased PLF which is achieved during this monitoring period, the equity IRR is not crossing the benchmark as defined in the registered PDD.

The actual PLF obtained during the current verification period is 26.44% and 26.16% respectively for 300 MW and 100 MW. As per the registered PDD PLF was considered 24% for both 300 MW and 100 MW, current monitoring periods achieved PLF is higher than the estimated PLF. Even after increase in PLF during this monitoring period, the equity IRR is not breaching and remains below the benchmark value of 13.41%. Hence, it can be concluded

that, due to increase in the PLF, there is no impact on the additionality of the project activity.

B.2. Post-Design Certification changes

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

There is no request for deviation applied during this monitoring period.

B.2.2. Corrections

There have not been any corrections to project information or parameters fixed at validation during the current monitoring period.

B.2.3. Changes to start date of crediting period

The start date of crediting period under GS4GG has been changed to 01/01/2019.

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

Not Applicable

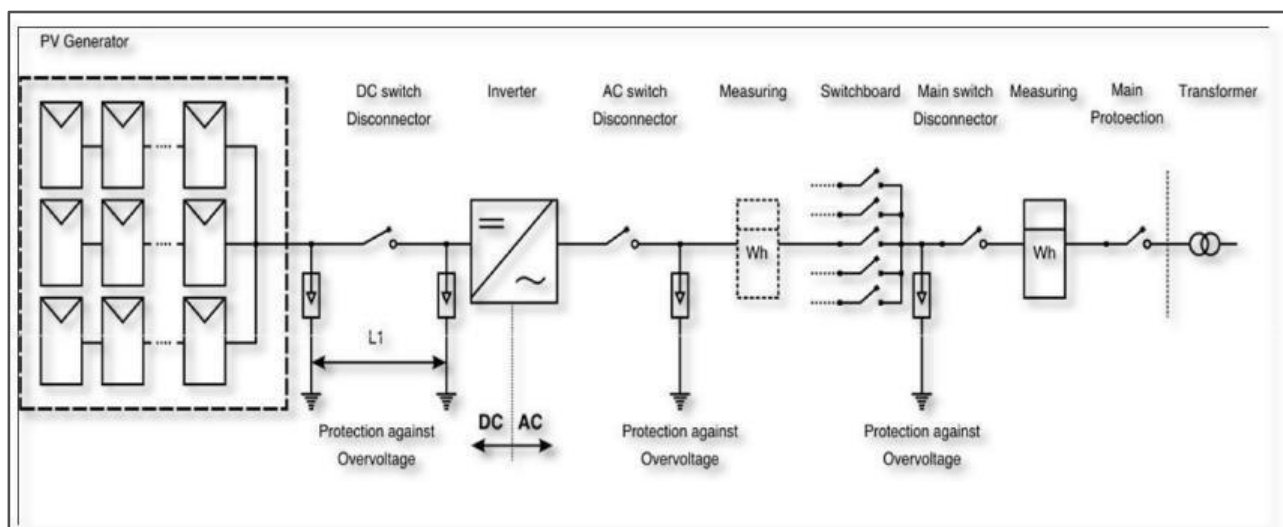
B.2.5. Changes to project design of approved project

There has not been any change in the PDD during the current monitoring period.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The monitoring methodology specified in the methodology requires that the project-monitoring plan to consist of monitoring of quantity of net electricity supplied to the grid in the year y. In order to monitor the mitigation of GHG due to the project activity, the total energy exported needs to be measured. The net energy supplied to grid by the project activity multiplied by emission factor for national grid, would form the baseline for the project activity.

Since the baseline emission factor is based on an ex-ante determination, monitoring of this parameter is not required. The sole parameter for monitoring is the net electricity exported to the grid. Single line diagram of the project is as below.



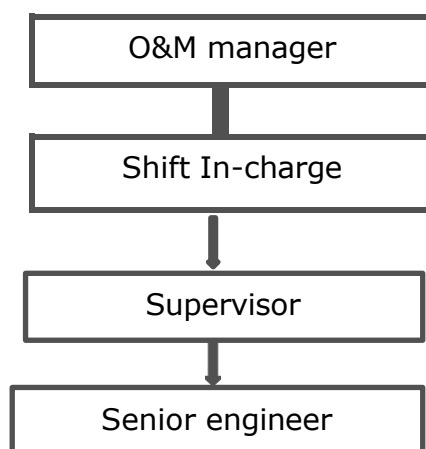
Monitoring roles and responsibilities

The operational and management structure implemented for data monitoring is as follows:

The monitoring plan is developed in accordance with the modalities and procedures for project activities and is proposed for grid-connected solar power project being implemented within India territory. The monitoring plan for both sites (300+100 MW), which is implemented by the project proponent describes about the monitoring organization, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

The authority and responsibility for monitoring, measurement, reporting and reviewing of the data rests with the project proponent. PP proposed the following structure for data monitoring, collection, data archiving and calibration of equipment's for this project activity.

The team comprises of the following members for both sites (300+100 MW):



Responsibilities of O & M Head: Overall functioning and maintenance of the project activity and overall responsibility of compliance with the Monitoring Plan.

Responsibilities of Plant In-charge: Responsibility for Maintains the data records, ensures completeness of data, and reliability of data. Regularly verifying the monthly energy generation date with energy sales receipt or installed meters reading for identification of any discrepancies in data collection and taking suitable action to rectify them.

Responsibilities of Shift In-charge: Responsibility for day-to-day data collection and maintains day-to-day logbook for monitored data. Responsibility for monthly and annual report generation.

Quality assurance of the data/reports and preliminary check of data for any discrepancies.

QA/QC procedures:

The energy meters at the feeders are maintained and owned by state electricity board. Neither the project proponent nor the site personnel have any control over it. The records are cross-checked with the records of sold electricity to state electricity board. The meters are calibrated by state electricity board at-least once in five years.

Data Measurement:

The export and import energy are measured continuously using above-mentioned Main & Check meters. Export & Import 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 readings are taken jointly and signed by the representatives of the state electricity board and project investors. Based on the reading's 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. In addition, 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 credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

Apportioning:

In case of common metering arrangement, state electricity board is apportioning and PP is getting break up sheet where the energy supplied by project activity to grid is mentioned.

The same break up sheet is used for invoice purpose. This apportioning process is under control of state electricity board and PP do not have any control on it.

Data Archiving:

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

Emergency preparedness:

The project activity does not result in any unidentified activity that can result in substantial emissions from the project activity. No need for emergency preparedness in data monitoring is visualized.

In the event that the main meter, which is used to record the net electricity exported by the project, is found to be faulty, it is repaired or replaced and the data from the check meter is used in its place. In the unlikely event that the check meter fails, it will also be repaired or replaced.

Training and maintenance requirements:

Each and all site personnel are provided with proper training to meet the requirements of the operations and maintenance. This ultimately leads to creativity in problem solving and increases efficiency. Routine maintenance of inverters, transformers are carried out during the present monitoring period and hence there is no such major breakdown occurs during the present monitoring period.

Personnel training:

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

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.

In case the start and end dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid would be calculated from the difference of number of days which are not matching of billing period and monitoring period or apportioned in line to the daily generation values for the said mismatch period.

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

SECTION D. DATA AND PARAMETERS

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

Relevant SDG Indicator	SDG 13
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 14, Dec 2018 ⁷
Value(s) applied)	0.9610
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 three recent years 2015-16, 2016-17 and 2017-18. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 14, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Purpose of data	For the calculation of the Baseline Emission
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

⁷ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

Relevant SDG Indicator	SDG 13
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 14, Dec 2018
Value(s) applied)	0.8644
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. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 14, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Purpose of data	For the calculation of the Baseline Emission
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

Relevant SDG Indicator	SDG 13
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 14, Dec 2018
Value(s) applied)	0.9368

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 comments	This parameter is fixed ex-ante for the entire crediting period.

D.2 Data and parameters monitored

Relevant SDG Indicator	7.2.1 Renewable energy share in the total final energy consumption
Data/parameter:	EG_{PJ, y}
Unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Measured/calculated/default	Calculated
Source of data	Monthly joint meter reading reports.

	The data is being calculated based on measurements from more than one meter considering import/export and losses between two substations as multiple meters are involved in the project activity. Net electricity supplied to the grid is the difference of export, import and any other losses	
Value(s) of monitored parameter	696,230.94 MWh	
	Period	Net power generated
	01/04/2023 to 31/12/2023	696,230.94 MWh
Monitoring equipment	Main Meters & Check Meters	
Measuring/reading/recording frequency:	Continuous measurement and monthly recording	
Calculation method (if applicable):	Thus, Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh Common metering at the substation: All the plants (including the project activity solar plant and other investors solar plant) are connected to a Pooling substation 132/220 KV GSS II and further electricity is transferred to 220/400 KV RRVPNL substation. The common metering point at RRVPNL substation consists of both main & check meters (ABT Meters) having accuracy class of 0.2s. The export/import losses between these two substations are apportioned based on pooling substation readings. For detailed schedule of calibration of energy meters during current monitoring period please refer annexure 1. The difference of final apportioned value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value is considered for ER calculations.	

QA/QC procedures:	The meters is approved, tested & sealed by the State Utility. The meters are in the custody of State Utility. The frequency of calibration is once in 5 years ⁸ . The monthly electricity supplied/exported by the project activity in the JMR report is crosschecked with the monthly invoices of sale. In the absence or delay in the meter calibration, appropriate Guidelines are applied appropriately to confirm the conservativeness of metering. The metering arrangement, accuracy class of meters, calibration frequency is under control of state electricity board and PP do not have any control on it. PP is getting value of net electricity supplied to grid and the same is considered the monitoring parameter. The billing is raised based on substation meters.
Purpose of data:	To Monitor the SDG 7 Indicator
Additional comments:	Data is 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.

Relevant SDG Indicator	SDG 13
Data/parameter:	Er_y
Unit	tCO ₂ /year
Description	Emission reductions achieved per year

⁸ http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf

Measured/calculated/default	Calculated	
Source of data	As per Actual Emission Reduction sheet	
Value(s) of monitored parameter	652,220	
	Period	Emission Reductions Achieved
	01/04/2023 to 31/12/2023 (Both dates are included)	652,220
Monitoring equipment	Not Applicable	
Measuring/reading/recording frequency:	Monthly recording	
Calculation method (if applicable):	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.	
QA/QC procedures:	Not Applicable	
Purpose of data:	To Monitor the SDG 13 Indicator	
Additional comments:	Data is 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.	

Relevant SDG Indicator	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities										
Data/parameter:	Number of employment generation and Salary										
Unit	Number										
Description	Number of people employed directly due to the project activity										
Measured/calculated/default	19										
Source of data	The number of persons employed is mentioned in the plant register, which can be crossed checked with attendance register.										
Value(s) of monitored parameter	2023: 19 Further below is the breakup of employment generated during the monitoring period <table border="1"> <thead> <tr> <th>Year</th><th>Skilled</th><th>Unskilled</th><th>Total</th></tr> </thead> <tbody> <tr> <td>2023</td><td>19</td><td>0</td><td>19</td></tr> </tbody> </table> Employment agreement and salary slips of persons directly getting employment opportunity from the project activity. The average hourly earnings of a person are higher than the local level. The same can be crosschecked 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			Year	Skilled	Unskilled	Total	2023	19	0	19
Year	Skilled	Unskilled	Total								
2023	19	0	19								

	and also helps to increase the income and living standards of the employees. No occupational injuries have been reported in the current monitoring period.
Monitoring equipment	-
Measuring/reading/recording frequency:	Monthly monitoring and annual recording
Calculation method (if applicable):	The total number of persons working in the plant is being calculated based on the daily log available at site. This parameter also monitors number of men/women employed by the project activity. The project activity ensures that "equal pay for work of equal value" for both men and women and there is no any discrimination against women. "The employment covers number of men and number of women employed by the project activity. The job is of type temporary/permanent or skilled/unskilled, local/ non-local etc. In addition, it is ensured that peoples get equal payment for equal work. The payment is based on work and no any gender inequality for payment for work of equal value". Further for all kind of jobs local people would be given preference based upon their competency level.
QA/QC procedures:	The number of persons employed is mentioned in the plant register, which can

	be crossed checked with attendance register.
Purpose of data:	To Monitor the SDG 8 Indicator
Additional comments:	-

Relevant SDG Indicator	8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training
Data/parameter:	Quality of Employment
Unit	Nos.
Description	Training of Staff
Measured/calculated/default	Measured
Source of data	Plant records or the training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc.
Value(s) of monitored parameter	2023: 18 Refer appendix 2 section for more details for site wise trainings.
Monitoring equipment	-
Measuring/reading/recording frequency:	Annual recording
Calculation method (if applicable):	Together with the technology supplier, the Project organize training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
QA/QC procedures:	The training records for all the employees

Purpose of data:	To Monitor the SDG 8 Indicator
Additional comments:	-

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

Not applicable as the project is non community services.

D.4. Implementation of sampling plan

>>

Not Applicable

SECTION E. CALCULATION OF SDG IMPACTS

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

652,220 tCO₂/ annum (for SDG 13)

696,230.94 MWh (for SDG 7)

18 training/ annum and 19 people employed (for SDG 8)

SDG 13 Climate Action:

As per the approved methodology ACM0002, Version 20.0, CDM Sectoral Scope: 01, baseline emissions for the project activity is calculated by multiplying the net quantity of electricity supplied by this project activity ($EG_{PJ,y}$) with the CO₂ baseline emission factor for the electricity displaced due to the project ($EF_{grid,CM,y}$) as follows:

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

Where,

$EF_{grid,CM,y}$	=	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (tCO ₂ /MWh)
$EG_{PJ,y}$	=	Net electricity supplied to the Indian grid (MWh)
BE_y	=	Baseline emissions in year y (tCO ₂)

Baseline emissions

$$\begin{aligned} BE_y &= EG_{PJ,y} \times EF_{grid,CM,y} \\ &= 696,230.94 \times 0.9368 \\ &= 652,220 \text{ tCO}_2 \text{ (round down value)} \end{aligned}$$

SDG 7: Affordable and Clean Energy

Baseline estimate of SDG 7 parameter is zero since there is no generation from renewable energy sources in baseline scenario.

SDG 8: Decent Work and Economic Growth

Baseline estimate of SDG 8 parameter is zero since there is no employment in baseline scenario.

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

As per the approved methodology ACM0002, Version 20.0, CDM Sectoral Scope: 01, baseline emissions for the project activity is calculated by multiplying the net quantity

of electricity supplied by this project activity ($EG_{PJ,y}$) with the CO₂ baseline emission factor for the electricity displaced due to the project ($EF_{grid,CM,y}$) as follows:

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

Where,

$EF_{grid,CM,y}$	=	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (tCO ₂ /MWh)
$EG_{PJ,y}$	=	Net electricity supplied to the Indian grid (MWh)
BE_y	=	Baseline emissions in year y (tCO ₂)

Baseline emissions

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

For most renewable power generation projects activities $PE_y = 0$. As per applied methodology, only emission associated with the fossil fuel combustion, emission from operation of geo-thermal power plants due to release of non-condensable gases, emission from water reservoir of Hydro should be accounted for the project emission. Since the project activity is a solar power project, $PE_y = 0$.

No Leakage emissions are considered. The main emission potentially giving rise to leakage in the context of electrical sector projects is emission arising due to activities arising such as power plant construction and upstream emission from fossil fuel use (e.g. extraction, processing, and transport). These emission sources are neglected, $LE_y = 0$.

$$\begin{aligned}
 BE_y &= EG_{PJ,y} \times EF_{grid,CM,y} \\
 &= 696,230.94 \times 0.9368 \\
 &= 652,220 \text{ tCO}_2 \text{ (Round down value)}
 \end{aligned}$$

Emission reduction (ER_y): The project activity mainly reduces carbon dioxide through substitution of grid electricity generation with fossil fuel fired power plant by renewable electricity. The emission reduction ER_y by the project activity during a given year y is the difference between Baseline emission and Project emission & Leakage emission.

$$\text{Since, } ER_y = BE_y - PE_y$$

Where,

ER_y = Emission Reduction in tCO_2 /year

BE_y = Baseline emission in tCO_2 /year

PE_y = Project emissions in tCO_2 /year

Thus,

$$ER_y = BE_y - PE_y$$

$$ER_y = BE_y - 0$$

As there are no emissions due to the implementation of the project, the project emissions are zero.

$ER_y = 652,220$ VERs (tCO_2) (round down value)

SDG outcomes vintage wise - For SDG 13

SDG indicator	Outcome for year 2023 (01/04/2023 to 31/12/2023)
SDG 13	652,220 VERs (tCO_2)

SDG outcomes vintage wise - For SDG 07

In the project scenario 696,230.94 MWh affordable and clean energy has been produced for SDG 7.

SDG indicator	Outcome for year 2023 (01/04/2023 to 31/12/2023)
SDG 07	696,230.94 MWh

SDG outcomes vintage wise -For SDG 08

Employment opportunities created for 19 persons and 18 trainings conducted during the current monitoring period.

SDG indicator	Outcome for year 2023 (01/04/2023 to 31/12/2023)
SDG 08 -Trainings	18 trainings
SDG 08 -Employments	19 employees

E.3. Calculation of leakage

The project activity is a renewable energy project and no fossil fuel is burnt within the project boundary due to the project activity and hence no leakage emissions are considered in the approved PDD.

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	Climate Action	652,220 tCO ₂	0	652,220 tCO ₂ (GS VERs)
7	Affordable and Clean Energy Contribution to Climate Security & Sustainable Development	0	696,230.94 MWh	696,230.94 MWh
8	Decent Work and Economic Growth	0	19 people employed	19 people employed
	Trainings provided to staff	0	18 Trainings provided to staff	18 Trainings provided to staff

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 ⁹ achieved during this monitoring period
13	587,621 tCO ₂	652,220 tCO ₂
7	627,264 MWh	696,230.94 MWh
8	1 training /annum and 10 people employed	18 training and 19 people Employed

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

For SDG 7 and SDG 13

As per the approved methodology ACM0002, Version 20.0 (EB 105, Annex 3), CDM Sectoral Scope: 01, baseline emissions for the project activity are calculated by

⁹ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

multiplying the net quantity of electricity supplied by this project activity (EGPJ, y) with the CO₂ baseline emission factor for the electricity displaced due to the project (EF_{grid,CM,y}) as follows:

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

Where,

EF_{grid,CM,y} = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (t CO₂/MWh)

EGPJ,y = Net electricity supplied to the Indian grid (MWh/yr)

BE_y = Baseline emissions in year y (tCO₂e/yr)

Baseline emissions SDG 13 -

= Annual estimation* no of days in monitoring period /365

= 779,933 x 275/365

= 587,621 tCO₂

For SDG 8

Employment opportunities created for 10 persons and 1 training estimated ex ante in the approved PDD.

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

The emission reductions as per the approved PDD annual estimation reduction is 779,933 tCO₂ and for the current monitoring period is estimated to be 587,621 tCO₂ whereas during the current monitoring period the emission reductions claimed are 652,220 tCO₂, which is approximately 10.99% higher than the estimated emission reductions for the same monitoring period.

During the present monitoring period, the project witnessed an increase of 10.99% in emission reductions as compared to ex-ante emissions, which is due to higher PLF achieved due to increased solar radiation and is thus nature dependent and not in control of PP. Further no design change in the project activity has taken place and even with an increased PLF which is achieved during this monitoring period, the equity IRR.

The actual PLF obtained during the current verification period is 26.44% and 26.16% respectively for 300 MW and 100 MW, as per the registered PDD PLF was considered 24% for both 300 MW and 100 MW, current monitoring periods achieved PLF is higher than the estimated PLF. Even after increase in PLF during this monitoring period, the equity IRR is not breaching and remains below the benchmark value of 13.41%.

After putting +10% more PLF for current monitoring period equity IRR is not breaching the benchmark of 13.41%.

Hence, it can be concluded that, due to increase in the PLF, there is no impact on the additionality of the project activity.

Capacity	PLF At the time of Registration	PLF of current monitoring period	Equity IRR with respect to putting current MP PLF	Benchmark	Result
300 MW	24%	26.44%	5.77%	13.41%	Not breaching
100 MW	24%	26.16%	5.46%	13.41%	Not Breaching

SECTION F. SAFEGUARDS REPORTING

No	1
Indicator	9.5 Hazardous and Non-hazardous Waste
Mitigation measure	Safe storage and hand over to authorized vendor to avoid contamination of soil.
Chosen parameter	Net energy generation by power plant

Current situation of parameter		The parameter is monitor and maintain record of generation of hazardous waste in terms of damaged solar PV modules.
Estimation of baseline situation of parameter		NA
Future target for parameter		The future target of the parameter is to securely store the material and maintain electronic records. The waste is periodically transferred to a licensed third-party vendor in full compliance with all applicable local laws and hazardous waste management regulations.
Way of monitoring	How	Monitoring of broken solar modules
	When	Ongoing, monitored at least annually
	By who	Monitored by the project owner

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.

Grievance registrar has been kept at the plant gate. This registrar is accessible to all for submission of complaints to monitor the ongoing communications from local stakeholders. There has been no grievance registered or issue raised by any stakeholder during this monitoring period of this project activity. For more details refer annexure 3.

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

Not Applicable

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

As confirmed by the Project Proponent, no legal contest or dispute arose pertaining to this project activity during the reporting period (01/04/2023 – 31/12/2023).

Annexure 1: Calibration Details

For Adani Solar Energy Jodhpur three private limited (earlier known as SB Energy One Private Limited):

Meter Number	Accuracy Class & Make	Calibration Date	Due date of Calibration
For Plot L1 A			
02843291 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
02843292 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
02843293 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L1 B			
2843294 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843295 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843296 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L1 C			
2843297 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843298 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843299 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L1 D			
2843300 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843301 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843302 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025

Meter Number	Accuracy Class & Make	Calibration Date	Due date of Calibration
For Plot L4 A			
2843327 (Main Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2843328 (Check Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2843329 (Standby Meter)	0.2 s, Elster	16/09/2020	15/09/2025
For Plot L4 B			
2843330 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843331 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843332 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025

For Plot L4 C			
2843333 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843334 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843335 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L4 D			
2843336 (Main Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2843337 (Check Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2843338 (Standby Meter)	0.2 s, Elster	16/09/2020	15/09/2025

Meter Number	Accuracy Class & Make	Calibration Date	Due date of Calibration
For Plot L5 A			
2843339 (Main Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2843340 (Check Meter)	0.2 s, Elster	16/09/2020	15/09/2025
2861545 (Standby Meter)	0.2 s, Elster	16/09/2020	15/09/2025
For Plot L5 B			
2861546 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2861547 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2861548 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L5 C			
2861549 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2861550 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2861551 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025
For Plot L5 D			
2861552 (Main Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2861553 (Check Meter)	0.2 s, Elster	15/09/2020	14/09/2025
2843326 (Standby Meter)	0.2 s, Elster	15/09/2020	14/09/2025

For Adani Solar Energy Jodhpur Four Private Limited (Earlier known as SB Energy Three Private Limited):

Meter Number	Accuracy Class & Make	Calibration Date	Due date of Calibration
For Plot P2F1			
RJB92278 (Main Meter)	0.2 s, Secure	25/09/2019	24/09/2024

RJB92275 (Check Meter)	0.2 s, Secure	25/09/2019	24/09/2024
B92281 (Standby Meter)	0.2 s, Secure	25/09/2019	24/09/2024
For Plot P2F2			
RJB92279 (Main Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92276 (Check Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92282 (Standby Meter)	0.2 s, Secure	25/09/2019	24/09/2024
For Plot P2F3			
RJB92280 (Main Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92277 (Check Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92283 (Standby Meter)	0.2 s, Secure	24/09/2019	23/09/2024

Meter Number	Accuracy Class & Make	Calibration Date	Due date of Calibration
For Plot P3F1			
RJB92288 (Main Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92289 (Check Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92292 (Standby Meter)	0.2 s, Secure	24/09/2019	23/09/2024
For Plot P3F2			
RJB92285 (Main Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92284 (Check Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92291 (Standby Meter)	0.2 s, Secure	24/09/2019	23/09/2024
For Plot P3F3			
RJB92286 (Main Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92287 (Check Meter)	0.2 s, Secure	24/09/2019	23/09/2024
RJB92290 (Standby Meter)	0.2 s, Secure	24/09/2019	23/09/2024

Annexure 2: Training Details

Training details for 300 MW:

Sl.no.	Scope of Training	Topic of Training	Vintage wise	Date of Training	Number of trainees attended
1.	HSE Training	Electrical safety awareness	For the Year 2023 (01/04/2023 to 31/12/2023)	27/04/2023	8
2.	Technical Training	Natural calamities WTG and structure failure	For the Year 2023 (01/04/2023 to 31/12/2023)		8
3.	HSE training	Awareness on material handling	For the Year 2023 (01/04/2023 to 31/12/2023)	07/05/2023	11
4.	Safety Training	Awareness on chemical safety	For the Year 2023 (01/04/2023 to 31/12/2023)		11
5.	Safety training	Awareness on PPE's	For the Year 2023 (01/04/2023 to 31/12/2023)	07/05/2023	11
6.	HSE training	Hot work safety awareness	For the Year 2023 (01/04/2023 to 31/12/2023)	07/05/2023	11
7.	Technical Training	Working at height scaffold and ladder use and inspection	For the Year 2023 (01/04/2023 to 31/12/2023)	27/07/2023	10
8.	Technical Training	PTW awareness	For the Year 2023 (01/04/2023 to 31/12/2023)	23/07/2023	8
9.	Technical Training	Gensuit- concern reporting, SI, I&I, Event escalation	For the Year 2023 (01/04/2023 to 31/12/2023)	27/07/2023	10

10	HSE Training	Defensive traffic safety land LSSR & CMP	For the Year 2023 (01/04/2023 to 31/12/2023)	23/07/2023	11
11.	Safety Training	Awareness on safety instruction	For the Year 2023 (01/04/2023 to 31/12/2023)	20/08/2023	11
12.	Technical training	CVF training	For the Year 2023 (01/04/2023 to 31/12/2023)	17/09/2023	7
13.	Technical training	RVDTS training	For the Year 2023 (01/04/2023 to 31/12/2023)	21/09/2023	17
14.	HSE training	Electrical safety	For the Year 2023 (01/04/2023 to 31/12/2023)	30/10/2023	7
15.	Technical training	Material handling	For the Year 2023 (01/04/2023 to 31/12/2023)	17/11/2023	9
16	HSE training	Awareness on PPE	For the Year 2023 (01/04/2023 to 31/12/2023)	21/11/2023	9
17	General training	Lock out tag out	For the Year 2023 (01/04/2023 to 31/12/2023)	24/12/2023	19

Training details for 100 MW:

Sl.no.	Scope of Training	Topic of Training	Vintage wise	Date of Training	Number of trainees attended
1.	Awareness	Training conducted on JSA R-A	For the year 2023 (01/04/2023 to 31/12/2023)	20/12/2023	6

Annexure 3: Grievances Details

NAME A.S.C.T-03 PVT. LTD. RJ330 SUBJECT GRIEVANCE REGISTER

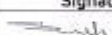
Certificate

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Is serially numbered from serial number 1 to 51

Dated

 Mr. Suresh Kumar (PSH)

Name of Register: -

S/no	Date	Checked by	Signature
1	JUL 2022	Suresh Kumar	
2	AUG 2022		
3	SEP 2022		
4	OCT 2022		
5	NOV 2022		
6	DEC 2022		
7	JAN 2023	Suresh Kumar	
8	FEB 2023		
9	MAR 2023		
10	APR 2023		
11	MAY 2023		
12	JUN 2023		

Annexure 4: Breakdown Details 300 MW- L1

Gen. Date	Section	Breakdown Remark	Breakdown Hrs.
07-04-23	Bhadla	PDP Pro Fault	0.533
23-04-23	Bhadla	Curtailment	4.833
24-04-23	Bhadla	Curtailment	4.583
25-04-23	Bhadla	Curtailment	4.783
26-04-23	Bhadla	Curtailment	1.367

27-04-23	Bhadla	Curtailment	6.317
28-04-23	Bhadla	Curtailment	5.367
29-04-23	Bhadla	Curtailment	4.367
30-04-23	Bhadla	Curtailment	0.433
01-05-23	Bhadla	Curtailment	5.05
02-05-23	Bhadla	Curtailment	4.767
03-05-23	Bhadla	Curtailment	4.55
04-05-23	Bhadla	Curtailment	4.783
05-05-23	Bhadla	Curtailment	4.317
06-05-23	Bhadla	Curtailment	4.717
07-05-23	Bhadla	Curtailment	4.417
08-05-23	Bhadla	Curtailment	5.2
09-05-23	Bhadla	Curtailment	4.883
10-05-23	Bhadla	Curtailment	4.567
11-05-23	Bhadla	Curtailment	4.917
11-05-23	Bhadla	PDP Pro Fault in unit 2	1.267
12-05-23	Bhadla	Curtailment	4.883
13-05-23	Bhadla	Curtailment	5.083

14-05-23	Bhadla	Curtailment	-7.467
16-05-23	Bhadla	Curtailment	2.8
15-05-23	Bhadla	Line 2 tripped from Govt GSS. Line 2 was tripped from 765 kV PGCIL GSS. Later Grid was restored and feeder were charged after confirmation from PSS.	3.4
15-05-23	Bhadla	Curtailment	1.2
18-05-23	Bhadla	Curtailment	1.817
17-05-23	Bhadla	Curtailment	3.867
19-05-23	Bhadla	Curtailment	3.667
20-05-23	Bhadla	Curtailment	3.933
21-05-23	Bhadla	Curtailment	6.7
22-05-23	Bhadla	Curtailment	4.7
23-05-23	Bhadla	Curtailment	5.033
24-05-23	Bhadla	Curtailment	4.783
25-05-23	Bhadla	PDP Pro Fault	0.283
26-05-23	Bhadla	Curtailment	1
29-05-23	Bhadla	GFDI Pro Fault	1.583
30-05-23	Bhadla	GFDI Pro Fault in Unit 3	0.55

31-05-23	Bhadla	Gfdi pro fault	5.433
01-06-23	Bhadla	GFDI Pro Fault	8.1
02-06-23	Bhadla	GFDI Pro Fault	5.483
02-06-23	Bhadla	GFDI Pro Fault	6.083
02-06-23	Bhadla	PDP Pro Fault	0.767
02-06-23	Bhadla	PDP Pro Fault	0.583
02-06-23	Bhadla	GFDI Pro Fault	0.25
05-06-23	Bhadla	GFDI Pro Fault	0.167
06-06-23	Bhadla	Curtailment	0.783
06-06-23	Bhadla	Curtailment	0.6
07-06-23	Bhadla	OG- A&B tripped from PSS end (Suraya Urja) because At PSS Trafo -2 tripped in WTI LV temperature high	0.25
08-06-23	Bhadla	Curtailment	3.25
09-06-23	Bhadla	Curtailment	0.067
09-06-23	Bhadla	Curtailment	3.933
10-06-23	Bhadla	Curtailment	3.9
11-06-23	Bhadla	MCR to ICR HT cable insulation failure	4.383
11-06-23	Bhadla	PDP Pro fault	0.367

11-06-23	Bhadla	Curtailment	3.4
12-06-23	Bhadla	Curtailment	3.8
13-06-23	Bhadla	Curtailment	3.9
14-06-23	Bhadla	Curtailment	2.467
15-06-23	Bhadla	Curtailment	0.117
18-06-23	Bhadla	IDT Tripped Due to NIFPS malfunction	10.55
20-06-23	Bhadla	Curtailment	3.317
22-06-23	Bhadla	Curtailment	0.067
22-06-23	Bhadla	Curtailment	3.217
23-06-23	Bhadla	Curtailment	1.983
23-06-23	Bhadla	Curtailment	1.2
23-06-23	Bhadla	Curtailment	0.967
24-06-23	Bhadla	Curtailment	1.367
24-06-23	Bhadla	PDP Pro Fault	0.283
29-06-23	Bhadla	Ctrl Power supply fault	7.1
30-06-23	Bhadla	PDP Pro Fault	0.317
01-07-23	Bhadla	Curtailment	0.617
02-07-23	Bhadla	PDP Pro Fault	0.25

03-07-23	Bhadla	PDP Pro Fault	0.333
03-07-23	Bhadla	PDP Pro Fault	0.117
04-07-23	Bhadla	Curtilment	0.617
04-07-23	Bhadla	Curtilment	1.983
04-07-23	Bhadla	Curtilment	0.5
05-07-23	Bhadla	Curtilment	0.45
05-07-23	Bhadla	Curtilment	0.217
05-07-23	Bhadla	Curtilment	0.433
05-07-23	Bhadla	Curtilment	0.167
08-07-23	Bhadla	PDP Pro Fault in unit 1	0.167
13-07-23	Bhadla	Curtilment	0.583
13-07-23	Bhadla	Gfdi pro fault	0.367
15-07-23	Bhadla	Curtilment	1.333
15-07-23	Bhadla	Curtilment	2.433
21-07-23	Bhadla	PDP Pro Fault	0.45
05-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	2.067
06-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low.	3.417

		Inverters underperformed with GFRT run alarm.	
07-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	1.267
08-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	1.317
08-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	3.6
09-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	1.95
09-08-23	Bhadla	Inverters stopped due to low grid voltage. Line 1 connected feeder L1 A and C faced grid voltage low.	0.65
09-08-23	Bhadla	Inverters stopped due to low grid voltage. Line 1 connected feeder L1 A and C faced grid voltage low.	0.65
09-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	1
09-08-23	Bhadla	Inverters stopped due to low grid voltage. Line 1 connected feeder L1 A and C faced grid voltage low.	0.333

09-08-23	Bhadla	Line 1 connected Feeder C ICR 6 faced grid voltage low. Inverters underperformed with GFRT run alarm.	2.233
10-08-23	Bhadla	Line 1 connected feeder L1 A and C faced grid voltage low. Inverters underperformed with GFRT run alarm.	3.717
11-08-23	Bhadla	Line 2 Tripped from PSS End Due to jumper got open at 220 KV GSS Bhadla	2.283
11-08-23	Bhadla	Line 2 Tripped from PSS End Due to jumper got open at 220 KV GSS Bhadla	0.367
17-08-23	Bhadla	Line 1 (Feeder D) Connected Inverter low perform due to low voltage issue in Line 1(INV Low Perform nearby 100KW) compare to line 2)	0.75
19-08-23	Bhadla	GFDI Pro Fault	0.283
22-08-23	Bhadla	Line 1 (Feeder D) Connected Inverter low perform due to low voltage issue in Line 1(INV Low Perform nearby 100KW) compare to line 2)	0.217
23-08-23	Bhadla	Line 1 connected feeder L1 OG -D , Connected inverters were stopped due to low voltage	1.85
23-08-23	Bhadla	Line 1 connected feeder L1 OG -D , Connected inverters	5.3

		were stopped due to low voltage	
24-08-23	Bhadla	Inverters underperform due to low grid voltage(2 units running out of 3). Line 1 connected feeder L1 D faced grid voltage low.	1.25
27-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	1.967
27-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	0.417
28-08-23	Bhadla	Inverters stopped due to low L1 grid voltage . Line 1 connected feeder D faced grid voltage low.	3.433
28-08-23	Bhadla	Inverters stopped due to low L1 grid voltage. Line 1 connected feeder D faced grid voltage low.	0.35
29-08-23	Bhadla	Inverters stopped due to low L1 grid voltage. Line 1 connected feeder D faced grid voltage low.	2.633
31-08-23	Bhadla	Inverters stopped due to L1 grid voltage low. Line 1 connected feeder D faced grid voltage low.	0.55
01-09-23	Bhadla	Line 1 grid voltage low so L1 connected feeder D all connected inverters under low performance.	0.317

02-09-23	Bhadla	Line 1 grid voltage low so Line 1 connected all inverters (Feeder D) under low performance. Unit 1 Stop out of 3 units of each inverter.	3.55
03-09-23	Bhadla	Inverters underperform due to low grid voltage (20% less) Line 1 connected feeder L1 D faced grid voltage low.	3.533
04-09-23	Bhadla	Inverters underperform due to low L1 grid voltage (20% less) Line 1 connected feeder L1 D faced grid voltage low.	1.133
07-09-23	Bhadla	HMI Hang Issue, Inverter not start at morning than inspected found HMI Hang	0.633
11-09-23	Bhadla	OG- D connected inverter was stopped due to low line voltage (Line 1)	1.183
13-09-23	Bhadla	Inverters underperform due to low L1 grid voltage (20% less) Line 1 connected feeder L1 D faced grid voltage low.	2.367
13-09-23	Bhadla	Inverter trip on PDP Pro Fault	0.167
27-09-23	Bhadla	Inverter trip on GFDI Pro Fault	2.217
28-09-23	Bhadla	Unit 2 DC breaker faulty.	1.217
28-09-23	Bhadla	Unit 3 DC breaker faulty.	3.7
14-10-23	Bhadla	PDP Pro Fault	0.233
14-10-23	Bhadla	PDP Pro Fault	0.433

16-10-23	Bhadla	Line-1 tripped from RVPNL Side in under voltage.	0.867
16-10-23	Bhadla	PDP Pro Fault	0.117
17-10-23	Bhadla	Curtailement	3.283
18-10-23	Bhadla	Curtailement	4.4
19-10-23	Bhadla	Curtailement	4.183
20-10-23	Bhadla	Curtailement	4.133
21-10-23	Bhadla	Curtailement	4.15
22-10-23	Bhadla	Curtailement	4.217
23-10-23	Bhadla	Curtailement	4.45
24-10-23	Bhadla	Curtailement	4.083
25-10-23	Bhadla	Curtailement	3.833
26-10-23	Bhadla	Curtailement	4.517
27-10-23	Bhadla	Curtailement	4.317
28-10-23	Bhadla	Curtailement	4.85
29-10-23	Bhadla	Curtailement	4.233
30-10-23	Bhadla	Curtailement	3.833
31-10-23	Bhadla	Curtailement	0.667
02-11-23	Bhadla	Curtailement	3.267

08-11-23	Bhadla	Line-1 tripped from remote end	0.333
08-11-23	Bhadla	Line-1 tripped from remote end	0.3
09-11-23	Bhadla	Curtailment	0.15
10-11-23	Bhadla	Curtailment	0.233
10-11-23	Bhadla	Curtailment	3.25
11-11-23	Bhadla	Curtailment	0.85
11-11-23	Bhadla	Curtailment	3.05
12-11-23	Bhadla	Curtailment	4.283
13-11-23	Bhadla	Curtailment	2.367
13-11-23	Bhadla	Curtailment	1.133
14-11-23	Bhadla	Curtailment	0.967
14-11-23	Bhadla	Curtailment	0.25
16-11-23	Bhadla	PDP Pro Fault	1.367
20-11-23	Bhadla	Inverter stopped due to low grid voltage in Line-1(L1 D Connected in Line-1)	1.9
22-11-23	Bhadla	Inverter low Perform due to low Grid Voltage (Inverter Run on 2 Units out of 3)	2.267
22-11-23	Bhadla	PDP Pro Fault	0.183
23-11-23	Bhadla	Inverter low Perform due to low Grid Voltage in Line 1	2.75

		Feeder D (Inverter Run on 2 Units out of 3)	
24-11-23	Bhadla	Inverter low Perform due to low Grid Voltage in Line 1 Feeder D (Inverter Run on 2 Units out of 3)	1.85
05-12-23	Bhadla	PDP Pro Fault in unit 1	0.433
11-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low.	3.867
13-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low.	2.733
20-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low. Inverter Shown GFRT alarm & run on 1 unit out of 3.	0.517
21-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low. Inverter showing GFRT alarm & run on 2 units out of 3.	0.333
21-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low. Inverter showing GFRT alarm & run on 2 units out of 3.	2.25
21-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low. Inverter showing GFRT alarm & run on 2 units out of 3.	1.733

22-12-23	Bhadla	Inverter Underperform Due to low line-1 (Connected Feeder OG-D) Voltage Low. Inverter showing GFRT alarm & run on 2 units out of 3.	2.767
26-12-23	Bhadla	HMI / Display Hang Issue causing not to operate anything.	3.8
30-12-23	Bhadla	Line 1 connected feeder L1 D faced grid voltage low. Inverters underperformed with GFRT run alarm.	1.767
31-12-23	Bhadla	L-1 OG D connected in Line-1 tripped in Under /over voltage from PSS end	2.15
31-12-23	Bhadla	OG- D(Line-1) Connected inverter are Stopped due to low voltage.	0.517
31-12-23	Bhadla	OG- D(Line-1) Connected inverter are undeforming due to low voltage.	1.167
Total (decimal hours)			412.752

Plant Breakdown has occurred during the current monitoring period, total breakdown duration is calculated as 412.752 hours.

Break down details 300 MW L4:

Gen. Date	Section	Breakdown Remark	Breakdown Hrs.
14-04-23	Bhadla	O/G-D feeder trip due to another feeder ACME L-3 B feeder jumper open connected in same HT panel	0.3

		due to high ins current of CBCT.	
17-04-23	Bhadla	PDP Protection Fault	0.8
18-04-23	Bhadla	PDP Protection Fault	0.117
06-04-23	Bhadla	PDP Protection Fault	0.3
19-04-23	Bhadla	Line-1 Voltage at inverter end (AB Phase Voltage 629.7, BC Phase Voltage 629.7, CA Phase Voltage 657.5) and at Grid Side (R Phase 33.71 V, B phase 32.94V, B phase 34.73V) unbalanced voltage observed	0.417
19-04-23	Bhadla	Line-1 (Connected Feeder-A,B,C,D) tripped due to ICT-03 tripped in differential protection at 400 KV GSS RRVPNL bhadla.	2.9
19-04-23	Bhadla	Line-1 (Connected Feeder-A,B,C,D) tripped due to ICT-03 tripped in differential protection at 400 KV GSS RRVPNL bhadla.	2.9
22-04-23	Bhadla	PDP Protection Fault	0.633
30-04-23	Bhadla	GFDI pro	0.367
01-05-23	Bhadla	PDP Protection Fault	0.4
02-05-23	Bhadla	Line-1 (Connected feeder A,B,C,D) tripped in Over Voltage	0.4

07-05-23	Bhadla	Vdc- samp-flt : DC voltage sampling fault occurs	0.517
08-05-23	Bhadla	PDP Protection Fault	0.85
09-05-23	Bhadla	PDP Protection Fault	0.4
12-05-23	Bhadla	PDP Protection Fault	0.167
12-05-23	Bhadla	PDP Protection Fault	0.35
13-05-23	Bhadla	PDP Protection Fault	0.167
20-05-23	Bhadla	PDP Protection Fault	0.2
21-05-23	Bhadla	OG-D tripped from PSS side, while charging L5 C feeder at that time PSS side their panel tripped in O/C & E/F	0.4
26-05-23	Bhadla	PDP Protection Fault	0.167
26-05-23	Bhadla	OG-A&D tripped from PSS side in Over Voltage	0.283
27-05-23	Bhadla	Grid_V Unbalanced	0.25
27-05-23	Bhadla	Grid_V Unbalanced	0.733
27-05-23	Bhadla	Grid_V Unbalanced	0.383
27-05-23	Bhadla	Grid_V Unbalanced	0.283
27-05-23	Bhadla	Grid_V Unbalanced	12.167
27-05-23	Bhadla	Grid_V Unbalanced	0.3
27-05-23	Bhadla	Grid_V Unbalanced	0.333

27-05-23	Bhadla	Grid_V Unbalanced	0.133
27-05-23	Bhadla	Grid_V Unbalanced	0.25
27-05-23	Bhadla	Grid_V Unbalanced	0.183
27-05-23	Bhadla	Grid_V Unbalanced	0.317
27-05-23	Bhadla	Grid_V Unbalanced	0.183
27-05-23	Bhadla	Grid_V Unbalanced	0.367
27-05-23	Bhadla	Grid_V Unbalanced	0.4
27-05-23	Bhadla	Grid_V Unbalanced	0.4
27-05-23	Bhadla	Grid_V Unbalanced	0.05
27-05-23	Bhadla	Grid_V Unbalanced	0.167
27-05-23	Bhadla	Grid_V Unbalanced	0.367
27-05-23	Bhadla	Grid_V Unbalanced	0.217
27-05-23	Bhadla	Grid_V Unbalanced	0.45
27-05-23	Bhadla	Grid_V Unbalanced	0.15
27-05-23	Bhadla	Grid_V Unbalanced	0.483
28-05-23	Bhadla	Line-1 (Connected feeder A,B,C,D) tripped in Over Voltage	2.133
29-05-23	Bhadla	GFDI PRO	0.317
30-05-23	Bhadla	Line 1 tripped from remote end	3.7

01-06-23	Bhadla	V mid-point offset and VDC samp f/t	1.583
05-06-23	Bhadla	Outgoing feeder- D is tripped on earth fault	2.017
05-06-23	Bhadla	Outgoing feeder- D is tripped on earth fault	2
05-06-23	Bhadla	HT Cable S/T joint fail	7.583
06-06-23	Bhadla	curtailment imposed by RRVPNL	0.6
08-06-23	Bhadla	PDP PRO fault	0.183
29-05-23	Bhadla	Tripped in over voltage from pss end	1.3
29-05-23	Bhadla	Tripped in over voltage from pss end	2.117
11-06-23	Bhadla	PDP Protection Fault	0.2
14-06-23	Bhadla	Grid_V Unbalanced	0.417
14-06-23	Bhadla	Line-1 tripped from remote end	1.667
15-06-23	Bhadla	PDP Protection Fault	0.333
15-06-23	Bhadla	PDP Protection Fault	0.417
17-06-23	Bhadla	GFDI Pro Fault	0.583
21-06-23	Bhadla	PDP Protection Fault	0.183
24-06-23	Bhadla	PDP Protection Fault	0.233
29-06-23	Bhadla	Curtailment	0.117
29-06-23	Bhadla	Curtailment	1.417

08-07-23	Bhadla	HT Panel CT failures	10
16-07-23	Bhadla	PDP Protection Fault	0.267
20-07-23	Bhadla	NA	0.017
24-07-23	Bhadla	GFDI Pro Fault	0.6
05-08-23	Bhadla	All connected inverters in feeders no L4 OG A& D (Line 1-connected feeder) were underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.85
06-08-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	3.183
08-08-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	3.617
09-08-23	Bhadla	Due to low line voltage inverters stopped	1.117
09-08-23	Bhadla	Due to low line voltage inverters stopped of B,C	1.8
09-08-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	1.95
09-08-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	0.517
09-08-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	1.5
11-08-23	Bhadla	Line 2 Tripped from PSS End Due to jumper got failure at 220 KV GSS Bhadla	2.283

11-08-23	Bhadla	Line 2 Tripped from PSS End Due to jumper failure at 220 KV GSS Bhadla	0.367
20-08-23	Bhadla	PDP Protection Fault	0.65
22-08-23	Bhadla	PDP Protection Fault	0.533
23-08-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters stopped due to low line voltage.	1.85
23-08-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters stopped due to low line voltage.	5.35
24-08-23	Bhadla	Due to low line-1 (Connected Feeder OG-A) voltage inverter ran of GFRT mode and perform less	1.25
27-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	1.967
27-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	0.733
28-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	3.433
28-08-23	Bhadla	OG-D connected inverter was stopped due to low line voltage (Line 1 running voltage 25KV)	0.35
29-08-23	Bhadla	Due to low line voltage inverters stopped	2.633

02-09-23	Bhadla	Line 1 Grid voltage Low inverters underperforming	3.617
03-09-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	3.583
04-09-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters were under performed due to GFRT error.	1.133
07-09-23	Bhadla	OG A tripped - ICT 5 tripped from SUCRL end due to sparking observed at their isolator end	0.367
07-09-23	Bhadla	OG D Tripped -ICT 4 tripped from SUCRL PSS end due to sparking observed at their Isolator	0.817
10-09-23	Bhadla	All connected inverters in feeder L4A (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.6
11-09-23	Bhadla	Due to low line voltage inverter ran of GFRT mode and perform less	1.533
12-09-23	Bhadla	Due to low line voltage inverter stop	0.25
13-09-23	Bhadla	Line 1 Grid voltage Low inverters underperforming	2.383
08-10-23	Bhadla	PDP pro fault	0.7
16-10-23	Bhadla	Line-1 tripped from RVPNL	1.033
19-10-23	Bhadla	Curtailment	4.183
20-10-23	Bhadla	Curtailment	4.133

21-10-23	Bhadla	Curtailment	4.15
22-10-23	Bhadla	Curtailment	4.217
23-10-23	Bhadla	Curtailment	4.45
24-10-23	Bhadla	Curtailment	4.083
25-10-23	Bhadla	Curtailment	3.833
26-10-23	Bhadla	Curtailment	4.517
27-10-23	Bhadla	Curtailment	4.317
28-10-23	Bhadla	Curtailment	4.85
29-10-23	Bhadla	Curtailment	4.233
30-10-23	Bhadla	Curtailment	3.833
31-10-23	Bhadla	Curtailment	0.667
02-11-23	Bhadla	Curtailment	3.267
08-11-23	Bhadla	when all three units were coming on load. The inverter was not running on full load. The inverter is under performing and in this inverter no fault recorded.	1.383
08-11-23	Bhadla	Line-1 tripped from remote end	0.333
09-11-23	Bhadla	Curtailment	0.15
10-11-23	Bhadla	Curtailment	0.233

10-11-23	Bhadla	Curtailment	3.25
11-11-23	Bhadla	Curtailment	0.567
11-11-23	Bhadla	Curtailment	3.333
12-11-23	Bhadla	Curtailment	4.283
13-11-23	Bhadla	Curtailment	2.367
13-11-23	Bhadla	Curtailment	1.133
14-11-23	Bhadla	Curtailment	1.25
14-11-23	Bhadla	Curtailment	0.4
18-11-23	Bhadla	when unit 2 was coming on load. The inverter was not running on full load. The inverter is under performing	0.95
20-11-23	Bhadla	Inverter stopped due to low grid voltage in Line-1	2.017
22-11-23	Bhadla	Inverter were running in GFRT error	2.267
23-11-23	Bhadla	Inverter were running in GFRT error	2.75
24-11-23	Bhadla	Inverter were running in GFRT error	1.85
29-11-23	Bhadla	GFDI Pro Fault	0.533
04-12-23	Bhadla	PDP Protection Fault	0.45
05-12-23	Bhadla	Inverter stopped due to grid voltage fluctuation	0.6
11-12-23	Bhadla	Due to low line-1 (Connected Feeder OG-A) voltage	3.867

		inverter ran of GFRT mode and perform less	
13-12-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters were under performed due to GFRT error.	2.733
18-12-23	Bhadla	Ground fault in INV-1	4.633
18-12-23	Bhadla	Blk 9,10 Inverters underperformed due to low voltage and stopped	0.483
18-12-23	Bhadla	Blk 12,13 inverters affected due to low voltage line 1 inverters underperform and stopped.	0.517
18-12-23	Bhadla	ICR 12 INVs underperform due to low line voltage and stopped	0.467
19-12-23	Bhadla	Line 1 Grid voltage Low inverters underperforming	0.733
19-12-23	Bhadla	Inverter stopped in PDP PRO fault	8.467
21-12-23	Bhadla	Due to low line-1 (Connected Feeder OG-A) voltage inverter ran of GFRT mode and perform less	2.25
21-12-23	Bhadla	Due to low line-1 (Connected Feeder OG-A) voltage inverter ran of GFRT mode and perform less	1.733
22-12-23	Bhadla	Due to low line-1 (Connected Feeder OG-A) voltage inverter ran of GFRT mode and perform less	2.767
30-12-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters were under	1.767

		performed due to Low line voltage	
31-12-23	Bhadla	Inverter tripped in Low Voc	0.517
31-12-23	Bhadla	Line-1 tripped from remote end	2.15
31-12-23	Bhadla	Inverter HMI hanged due to PT card failure	3.85
31-12-23	Bhadla	Line 1 connected (L4 OG-A Feeder) inverters were under performed due to Low line voltage	1.167
Total (decimal hours)			248.467

Plant Breakdown has occurred during the current monitoring period, total breakdown duration is calculated as 248.467 hours.

Breakdown details 300 MW L5:

Gen. Date	Section	Breakdown Remark	Breakdown Hrs.
13-04-23	Bhadla	PDP Pro Fault	6
14-04-23	Bhadla	Trip in earth fault	2.233
14-04-23	Bhadla	Manual shutdown for safety purpose.	0.85
14-04-23	Bhadla	Trip from PSS end due to fault in another SPD (ACME) Plot L3, B feeder. CBCT protection was operated for parallel feeders, connected to same power trafo.	0.35
03-04-23	Bhadla	PDP Pro Fault	12.317
19-04-23	Bhadla	Wave trap Jumper failure at RRVPNL JSS in Line-1	14.817

		connected ICT-3 CONNECTED L-5 O/G C & O/G D	
19-04-23	Bhadla	Manual Trip from PSS end for load shifting L-5 O/G B connected in PT-2 pss end	0.183
19-04-23	Bhadla	Line-1 Connected Feeder L-5 O/G C and D inverter not start due to Grid Unbalanced fault in inverter as B phase line voltage was unbalanced.	0.383
19-04-23	Bhadla	L5 OG A& B (60% load restricted) due to 400kv JSS Bhadla ICT-3 Failure.	6.05
19-04-23	Bhadla	L5 OG A& B (90% load restricted) due to 400kv JSS Bhadla ICT-3 Failure.	0.867
20-04-23	Bhadla	L5 OG A& B (69% load restricted) due to 400kv JSS Bhadla ICT-3 Failure.	4.183
22-04-23	Bhadla	L5 OG A& B (88% load restricted) due to 400kv GSS Bhadla ICT-3 Failure.	4.633
23-04-23	Bhadla	PDP Pro	0.25
29-04-23	Bhadla	PDP Pro Fault	0.2
30-04-23	Bhadla	GFDI pro	0.6
30-04-23	Bhadla	GFDI Pro	0.717
01-05-23	Bhadla	GFDI PRO	0.5
02-05-23	Bhadla	Line-1 connected feeder trip in over voltage from PSS end	0.417
05-03-23	Bhadla	GFDI PRO	5.7

03-05-23	Bhadla	PDP Pro	0.417
04-05-23	Bhadla	GFDI PRO	11.217
04-05-23	Bhadla	GFDI PRO	11.217
05-05-23	Bhadla	GFDI PRO	11.15
06-05-23	Bhadla	PDP Pro	0.617
06-07-23	Bhadla	PDP Pro Fault	0.3
12-05-23	Bhadla	Trip in earth fault	2.117
12-05-23	Bhadla	Manual shut for safety purpose. Reason mentioned in action taken.	0.75
13-05-23	Bhadla	Trip in earth fault	0.333
13-05-23	Bhadla	Trip in earth fault	1.75
15-05-23	Bhadla	L-5 OG A and L-5 OG B connected in Line-2 tripped from PSS end	3.4
21-05-23	Bhadla	L5 OG C trip from PSS end.	6.267
21-05-23	Bhadla	L5 OG D manual shutdown	1.1
21-04-23	Bhadla	Curtailment	4.9
26-05-23	Bhadla	Line-1 connected feeder OG C and D trip in over voltage from PSS end	0.783
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.117
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.117

27-05-23	Bhadla	Inv unit-1 stop in Grid_V Unbalanced	0.267
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.3
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.45
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.4
27-05-23	Bhadla	Inv 2 units stop in Grid_V Unbalanced	0.467
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.333
27-05-23	Bhadla	Inv stop in Grid_V Unbalanced	0.483
29-05-23	Bhadla	L-5 OG C and L-5 OG C connected in Line-1 tripped in over voltage from PSS end	1.3
29-05-23	Bhadla	L-5 OG C and L-5 OG C connected in Line-1 tripped in over voltage from PSS end	2.117
29-05-23	Bhadla	Manually SCB turned off due to rain water near SCB	0.617
29-05-23	Bhadla	Manually SCB turned off due to rain water near SCB	2.217
30-05-23	Bhadla	L-5 OG C and L-5 OG D connected in Line-1 tripped in over voltage from PSS end	3.7
04-06-23	Bhadla	INV trip in GFDI Pro Fault	1.783
31-05-23	Bhadla	PDP Protection Fault	0.683
05-06-23	Bhadla	Manual shutdown for Safety purpose for L-4 OG D cable Isolation (End termination	1.967

		rectification work of L4 D Cable failure))	
05-06-23	Bhadla	Inv trip in GFDI fault	0.267
07-06-23	Bhadla	OG- B tripped from PSS end (Suraya Urja) because At PSS Trafo -2 tripped in WTI LV temperature high	0.25
14-06-23	Bhadla	Grid_V Unbalanced	0.333
14-06-23	Bhadla	Line-1 tripped from remote end	1.667
16-06-23	Bhadla	GFDI Pro	0.383
22-06-23	Bhadla	Inverter Stop in PDP Pro Error	0.433
26-06-23	Bhadla	PDP Pro Fault	0.533
26-06-23	Bhadla	NA	0.017
26-06-23	Bhadla	NA	0.017
26-06-23	Bhadla	NA	0.017
15-07-23	Bhadla	PDP Pro Fault	0.3
15-07-23	Bhadla	PDP Pro Fault	0.3
27-06-23	Bhadla	GFDI pro fault	0.467
27-06-23	Bhadla	GFDI pro fault	0.267
27-06-23	Bhadla	GFDI Pro	0.767
09-07-23	Bhadla	PDP Pro Fault in unit 2	0.233

20-07-23	Bhadla	NA	0.017
05-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.85
06-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	3.183
08-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	3.667
09-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	6.15
10-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR A& D (Line 1-connected feeder) were underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	4.05
10-08-23	Bhadla	All connected inverters in feeder no L5 OG FDR D (Line 1-connected feeder) was	1.333

		underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	
11-08-23	Bhadla	Line 2 connected feeder (L5_OG_B & OG_C) tripped in under voltage due to R - Phase Jumper open at 220 KV Govt GSS Bhadla.	2.55
23-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	1.85
23-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	5.35
24-08-23	Bhadla	All connected inverters in feeder nos L5 OG FDR_A& D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.25
27-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 25.64KV)	1.967
27-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 25KV)	0.417
28-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	3.433

28-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	0.35
29-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	2.633
31-08-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	0.55
01-09-23	Bhadla	Line 1 Connected feeder OG- A & D connected inverter were underperforming due to low line voltage	0.317
02-09-23	Bhadla	OG- A & D Connected inverter is underperforming due to low voltage	3.617
03-09-23	Bhadla	Inverters underperform due to low grid voltage (20% less) Line 1 connected feeder L5 A & D faced grid voltage low.	3.583
04-09-23	Bhadla	OG- A & D Connected inverter are underperforming due to low voltage	1.133
06-09-23	Bhadla	PDP Pro Fault	0.267
07-09-23	Bhadla	L5 OG FDR _D connected ICT 5 tripped at Surya Urja PSS end because sparking observed at isolator	0.367
07-09-23	Bhadla	Plot L5 OG feeder _C connected ICT 4 tripped at	12.817

		Surya Urja PSS end because sparking observed at isolator	
08-09-23	Bhadla	PDP Pro Fault	0.367
08-09-23	Bhadla	PDP Pro Fault	0.283
08-09-23	Bhadla	PDP Pro Fault	0.383
10-09-23	Bhadla	All connected inverters in feeder nos L5 OG FDR_A& D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.017
10-09-23	Bhadla	All connected inverters in feeder nos L5 OG FDR_A& D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	1.6
11-09-23	Bhadla	OG- A connected inverter were stopped due to low line voltage (Line 1 & running voltage low)	0.8
11-09-23	Bhadla	OG- D connected inverter were stopped due to low line voltage (Line 1 & running voltage low)	1.25
11-09-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	1.817
12-09-23	Bhadla	OG- A & D connected inverter were stopped due to low line voltage (Line 1 & running voltage 24KV)	1.383

13-09-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	2.883
13-09-23	Bhadla	PDP Pro Fault	0.333
07-10-23	Bhadla	PDP Pro Fault	0.467
16-10-23	Bhadla	Line-1 tripped from RVPNL Side in under voltage.	1.033
19-10-23	Bhadla	Curtailement	4.183
20-10-23	Bhadla	Curtailement	4.133
21-10-23	Bhadla	Curtailement	4.15
22-10-23	Bhadla	Curtailement	4.217
23-10-23	Bhadla	Curtailement	4.45
24-10-23	Bhadla	Curtailement	4.083
25-10-23	Bhadla	Curtailement	3.833
26-10-23	Bhadla	Curtailement	4.517
27-10-23	Bhadla	Curtailement	4.317
28-10-23	Bhadla	Curtailement	4.85
29-10-23	Bhadla	Curtailement	4.233
30-10-23	Bhadla	Curtailement	3.833
31-10-23	Bhadla	Curtailement	0.667
02-11-23	Bhadla	Curtailement	3.267

03-11-23	Bhadla	PDP Pro Fault	0.233
08-11-23	Bhadla	line-1 tripped from GOVT PSS Side.	0.333
09-11-23	Bhadla	16% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (84% Load restricted at RJ300 L5) Ld No -237	0.15
10-11-23	Bhadla	18% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (82% Load restricted at RJ300 L5) Ld No -266	3.5
11-11-23	Bhadla	18% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (82% Load restricted at RJ300 L5) Ld No -308	0.85
11-11-23	Bhadla	16% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (84% Load restricted at RJ300 L5) Ld No -308	3.05
12-11-23	Bhadla	20% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (80% Load restricted at RJ300 L5) Ld No -333	4.283
13-11-23	Bhadla	20% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (80% Load restricted at RJ300 L5) Ld No -369	2.367

13-11-23	Bhadla	18% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (80% Load restricted at RJ300 L5) Ld No -369	1.133
14-11-23	Bhadla	20% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (80% Load restricted at RJ300 L5) Ld No -391	0.967
14-11-23	Bhadla	16% Curtailment imposed as per RRVPNL Instruction in Line-1&2 (84% Load restricted at RJ300 L5) Ld No -391	0.25
15-11-23	Bhadla	PDP Pro Fault	0.65
19-11-23	Bhadla	AC switch breaking	0.583
20-11-23	Bhadla	Inverters stopped due to low grid voltage in Line-1 (L5 A&D Connected in Line-1)	1.9
22-11-23	Bhadla	AC switch breaking	0.583
22-11-23	Bhadla	All connected inverters in feeder no L5 OG FDR -A&D (Line 1-connected feeder) was underperforming and runs in GFRT alarm due to Low grid voltage (Line-1).	2.333
23-11-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	2.75
24-11-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	1.85

11-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	3.867
13-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	2.733
18-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	0.35
21-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	0.333
21-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	2.25
21-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	1.733
22-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	2.767
28-12-23	Bhadla	ICR 1 INV 2 Low performed due to voltage fluctuation (inv running with single unit).	1.5
30-12-23	Bhadla	OG- A & D(Line-1) Connected inverter are undeforming due to low voltage.	1.767
31-12-23	Bhadla	L-5 OG A and L-5 OG D connected in Line-1 tripped in Under /over voltage from PSS end.	2.15
31-12-23	Bhadla	OG- A & D(Line-1) Connected inverter are stopped due to low voltage.	0.517

31-12-23	Bhadla	OG- A & D Connected inverter are undeforming due to low voltage	1.167
Time (Decimal hours)			321.086

Plant Breakdown has occurred during the current monitoring period, total breakdown duration is calculated as 321.086 hours.

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