



SOLAR PHOTOVOLTAIC PROJECT BY GIRIRAJ RENEWABLES PRIVATE LIMITED

Document Prepared by

Emergent Ventures India Pvt. Ltd

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The main purpose of this project activity is to generate clean form of electricity through renewable solar energy source. The project is a bundled project activity which involves installation of 153 MW solar projects in different states of India through SPVs.

The details of the SPVs for the project and their location of installation are mentioned in the table below: -

Name of SPV	Capacity Commissioned	COD	Connection with Grid	State
Avaada Sustainable Energy Pvt. Ltd	30 MW	02-Mar-2018	Indian Grid	Karnataka
Avaada Clean Energy Power Limited	5 MW	14-Sep-2018	Indian Grid	Uttar Pradesh
Avaada Energy Private Limited	28 MW	16-Apr-2018	Indian Grid	Maharashtra
Solarsys Non-Conventional Energy Pvt. Ltd	30 MW	30-Mar-2018	Indian Grid	Karnataka
	60 MW	31-Mar-2018	Indian Grid	Karnataka

Total emission reductions achieved in this monitoring period:

During the Current Monitoring Period from 01-Jan-2021 to 31-Aug-2021 (First and last date included) the project activity has supplied **204,491** MWh of electricity, and thus contributing to the GHG reductions **191,567** tCO₂e.

1.2 Sectoral Scope and Project Type

Sectoral Scope: 01 - Energy industries (renewable / non-renewable sources)

Project Type: I - Renewable Energy Projects

Project Category: Grid-connected electricity generation from renewable sources ACM0002; Version 19.0

The project is not a grouped project activity.

1.3 Project Proponent

Organization name	Giriraj Renewables Private Limited ¹
Contact person	Praveen Golash
Title	Senior General Manager
Address	304, Shoppers Plaza, Opp. Municipal Market, CG Road, Navrangpura. Ahmedabad-380009
Telephone	-
Email	-

1.4 Other Entities Involved in the Project

Organization name	Emergent Ventures India Pvt. Ltd.
Role in the Project	Project Consultant
Contact person	Atul Sanghal
Title	Business Head
Address	Magnum Tower 1, 8th Floor, Sector 58, Gurgaon
Telephone	+91-97173 96309
Email	contact@emergent-ventures.com

1.5 Project Start Date

02-March-2018

1.6 Project Crediting Period

Crediting Period Start date: 02-March-2018

Crediting Period End date: 01-March-2028

The project activity adopts renewable crediting period of 10 years period which can be renewed for maximum twice.

¹ On 1-Jan-2019, the name of company 'Giriraj Renewables Private Limited' has been changed to 'Avaada Energy Private Limited'. The name change certificate is provided in Appendix 3.

1.7 Project Location

Name of SPVs	Capacity	Village	Taluka	District	State	Latitude (N)	Longitude (E)
Avaada Sustainable Energy Pvt Ltd	30 MW	Doneteme nahalli	Molaka Imuaru	Chitradurga	Karnataka	14° 40' 38.2728"	76° 40' 34.0644"
Avaada Clean Energy Power Limited	5 MW	Ordnance Factory		Kanpur	Uttar Pradesh	26° 28' 34.7124"	80° 16' 10.4340"
Avaada Energy Private Limited	28 MW	Varkute and Malavadi	Man	Satara	Maharashtra	17° 33' 28.8"	74° 48' 36.7"
Solarsys Non-Conventional Energy Pvt Ltd	30 MW	Banavikalu	Kudligi	Ballary	Karnataka	14° 45' 41.3"	76° 31' 21.9"
	60 MW	Balakundi	Ilkal	Balkot/ Bagalkot(old name of the district)	Karnataka	15° 57' 35.2"	76° 04' 34.3"

1.8 Title and Reference of 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 19.0

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 system- Version 07.0 (EB 100, Annex 04)
- Tool for the demonstration and assessment of additionality -Version 07.0.0 (EB 70, Annex 08)

1.9 Participation under other GHG Programs

The project has neither been registered nor seeking registration under any other GHG programs. The project is registered only in VCS program. The Project is not rejected by other GHG programs.

1.10 Other Forms of Credit

Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits.

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program.

However, it can be crosschecked that PP is not claiming REC benefits, the same can be verified with the REC accreditation body of India.

1.11 Sustainable Development

Contribution to sustainable development:

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

Social well-being: The project helps in generating employment opportunities in its operations. The project activity leads to development in infrastructure in the region like development of roads and also promotes business with improved power generation.

Economic well-being: The project is a clean technology investment in the region, and helps to reduce the demand supply gap in the state.

Technological well-being: The operation of project activity leads to promotion of Solar based power generation and encourage other entrepreneurs to participate in similar projects

Environmental well-being: Solar being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission, the Project activity also helps in avoiding significant amount of GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.

Table 1: Sustainable Development Contributions*

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
Sequential row number	SDG Target number	Number and text of SDG indicator or, if no official SDG indicator is applicable, user-defined indicator	Indicate the project's contribution to the SDG Indicator (implemented activities to increase or decrease)	Brief description of the quantifiable impact of the project's activities related to the SDG indicator, during the monitoring period.	Brief description of the cumulative quantifiable impact of the project's activities related to the SDG indicator, over the project lifetime.

*No SDG indicator is presented here since PP submitted a separate SDG report for the current Monitoring Period which is already under Verra review in line with previous SDG reports.

2 SAFEGUARDS

2.1 No Net Harm

The project activity does not involve any major construction activity. It primarily requires the installation of the solar PV panels, interfacing the generators with the State Electricity Board by setting up HT transmission lines and installation of other accessories.

The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. This report clearly mentioned that solar PV project activity operations do not result in direct air pollution, noise pollution. Please refer below web link for the same².

Thus there are no any significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity.

2.2 Local Stakeholder Consultation

The stakeholders can anytime provide their inputs or concerns over the project, and for this, PP has placed a grievance register onsite, where in they can put down their complaint and the same if found genuine will be addressed immediately. The site manager is responsible for addressing the grievances received from stakeholders.

No complaints were received during the monitoring period.

2.3 AFOLU-Specific Safeguards

Not Applicable, as this project is a non-AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The details of the SPVs for the project and their location of installation are mentioned in the table below:

² <https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf>

Name of SPVs	Capacity Commissioned	COD	Connection with Grid	State
Avaada Sustainable Energy Pvt Ltd	30 MW	02-Mar-2018	Indian Grid	Karnataka
Avaada Clean Energy Power Limited	5 MW	14-Sep-2018	Indian Grid	Uttar Pradesh
Avaada Energy Private Limited	28 MW	16-Apr-2018	Indian Grid	Maharashtra
Solarsys Non-Conventional Energy Pvt Ltd	30 MW	30-Mar-2018	Indian Grid	Karnataka
	60 MW	31-Mar-2018	Indian Grid	Karnataka

Solar PV Project Technology Details –

The project activity aims to harness solar energy through installation of Solar PV project with total installed capacity of 153 MW.

The technical specification of 30 MW solar project by Avaada Sustainable Energy Pvt Ltd.

Technical details of the equipment	Description
Technology Used	Solar PV technology (Poly-Crystalline)
Number of modules and their model capacity	No. of Modules-192024 Model capacity-310 Wp, 315 Wp & 320 Wp
Number of Inverters , Inverter Make & Model	67 Inverters TMEIC-PVLO750 E(750 KW) –65 nos TMIEC-PVLO500 E(625 KW) –2 nos
Modules per String	42/2
Tilt	Tracking
Tracker	Single Axis tracker

The technical specification of 5 MW solar project by Avaada Clean Energy Power Limited.

Technical details of the equipment	Description
Technology Used	Solar PV technology (Poly-Crystalline)
Number of modules and their model capacity	No. of Modules-192024 Model capacity-310 Wp, 315 Wp & 320 Wp
Number of Inverters, Inverter Make & Model	67 Inverters TMEIC-PVLO750 E(750 KW) –65 nos. TMIEC-PVLO500 E(625 KW) –2 nos.
Modules per String	42/2

Technical details of the equipment	Description
Tilt	Tracking
Tracker	Single Axis tracker

The technical specification of 28 MW solar project by Avaada Energy Private Limited (erstwhile known as Giriraj Renewables Pvt. Ltd.).

Technical details of the equipment	Description
Technology Used	Solar PV technology (Poly-Crystalline)
Number of modules and their model capacity	No. of Modules-103740 Model capacity-315 Wp, 320 Wp, 325 Wp & 330 Wp Renesola, Trina, Risen, JA Solar, Exide & Waree
Number of Inverters , Inverter Make & Model	16 Inverters ABB-PVS800-1732kW-16 Nos
Modules per String	42/2
Tilt	Fixed Tilt, 14 Deg
Tracker	No Tracker

The technical specification of 30 MW solar project by Solarsys Non-Conventional Energy Pvt Ltd.

Technical details of the equipment	Description
Technology Used	Solar PV technology (Poly-Crystalline)
Number of modules and their model capacity	No. of Modules-192024 Model capacity-310 Wp, 315 Wp & 320 Wp
Number of Inverters , Inverter Make & Model	67 Inverters TMEIC-PVLO750 E(750 KW) –65 nos TMEIC-PVLO500 E(625 KW) –2 nos
Modules per String	42/2
Tilt	Tracking
Tracker	Single Axis tracker

The technical specification of 60 MW solar project by Solarsys Non-Conventional Energy Pvt Ltd.

Technical details of the equipment	Description
Technology Used	Solar PV technology (Poly-Crystalline)
Number of modules and their model capacity	No. of Modules-192024 Model capacity-310 Wp, 315 Wp & 320 Wp
Number of Inverters , Inverter Make & Model	67 Inverters TMEIC-PVLO750 E(750 KW) –65 nos

Technical details of the equipment	Description
	TMIEC-PVLO500 E(625 KW) -2 nos
Modules per String	42/2
Tilt	Tracking
Tracker	Single Axis tracker

The project breakdown details are provided in Appendix 2.

3.2 Deviations

3.2.1 Methodology Deviations

Not applicable

3.2.2 Project Description Deviations

Of the originally planned 100MW capacity by Avaada Energy Private Limited. (as per the registered Joint PD-MR Version 03 dated 15-May-2020), 28MW was installed on 16-April-2018. The remaining 72MW however has also been installed but under a separate SPV M/s Avaada Satara MH Pvt. Ltd. on 09-November-2020. A commissioning certificate issued by MSEDCL for the same is submitted to VVB. Project proponent is not claiming GHG emission reductions on account of this 72MW capacity. For rest of the crediting period the project capacity will remain as 153 MW only instead of 225MW that was registered earlier.

The geo coordinates of the Solarsys Non-Conventional Energy Pvt Ltd 30 MW and Solarsys Non-Conventional Energy Pvt Ltd 60 MW were incorrectly recorded in previous documentations. The same have been corrected as below.

Name of SPVs	Capacity	State	Latitude (N)	Longitude (E)
Solarsys Non-Conventional Energy Pvt Ltd	30 MW	Karnataka	14° 45' 41.3"	76° 31' 21.9"
	60 MW	Karnataka	15° 57' 35.2"	76° 04' 34.3"

3.3 Grouped Projects

The project is not a grouped project activity.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter

EF_{grid,OM,y}

Data unit	tCO ₂ /MWh
Description	Operating Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database ³ , Version 14, December 2018
Value applied	0.9610
Justification of choice of data or description of measurement methods and procedures applied	Calculated as per “Tool to calculate the emission factor for an electricity system, version 07” as 3-year generation weighted average using data for the years 2015-16, 2016-17 & 2017-18. The data are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	EF _{grid,BM,y}
Data unit	tCO ₂ /MWh
Description	Build Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database ⁴ , Version 14, December 2018
Value applied	0.8644
Justification of choice of data or description of measurement methods and procedures applied	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, Government of India.
Purpose of Data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	EF _{grid,CM,y}
Data unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database ⁵ , Version 14, December 2018

³ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

⁴ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

⁵ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

Value applied	0.9368
Justification of choice of data or description of measurement methods and procedures applied	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
Comments	This parameter is fixed ex-ante for the entire crediting period.

4.2 Data and Parameters Monitored

For Karnataka Site

Data / Parameter	$EG_{PJ,y}$
Data unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Source of data	Monthly joint meter reading reports
Description of measurement methods and procedures to be applied	The difference of final 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.
Frequency of monitoring/recording	Continuous measurement & monthly recording
Value monitored	163,601 MWh
Monitoring equipment	1. Avaada Sustainable Energy Private Limited (30 MW) Meter Serial No: 18015390 (Main meter) 18015388 (check meter) Meter type: ABT meters Meter Make: L&T Accuracy Class: 0.2s 2. Solarsys Non-Conventional Energy Private Limited (30 MW) Meter Serial No 18015356 (Main meter) 18015439 Check meter) Meter type: ABT meters

	Meter Make: L&T Accuracy Class: 0.2s 3. Solarsys Non-Conventional Energy Private Limited (60 MW) Meter Serial No 18015391 (Main meter) 18015392 (check meter) Meter type: ABT meters Meter Make: L&T Accuracy Class: 0.2s
QA/QC procedures to be applied	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. The monthly electricity supplied/exported by the project activity in the JMR report is cross checked with the monthly invoices of sale. In the absence or delay in the meter calibration appropriate Guidelines is 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 does 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 the data	Calculation of baseline emissions
Calculation method	Thus, Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh
Comments	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.

For Kanpur (Uttar Pradesh) Site

Data / Parameter	$EG_{PJ,y}$
Data unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Source of data	Monthly joint meter reading reports

Description of measurement methods and procedures to be applied	The difference of final 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.
Frequency of monitoring/recording	Continuous measurement & monthly recording
Value monitored	6,732 MWh
Monitoring equipment	1. Avaada Clean Energy Power Limited (5 MW) Meter Serial No • UPP67363(Main meter) • UPP67364 (Check meter) • UPP67365 (Standby Meter) Meter type: ABT meters Meter Make: Secure Accuracy Class: 0.2s
QA/QC procedures to be applied	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. The monthly electricity supplied/exported by the project activity in the JMR report is cross checked with the monthly invoices of sale. In the absence or delay in the meter calibration appropriate Guidelines is 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 does 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 the data	Calculation of baseline emissions
Calculation method	Thus, Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh
Comments	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.

For Maharashtra Site

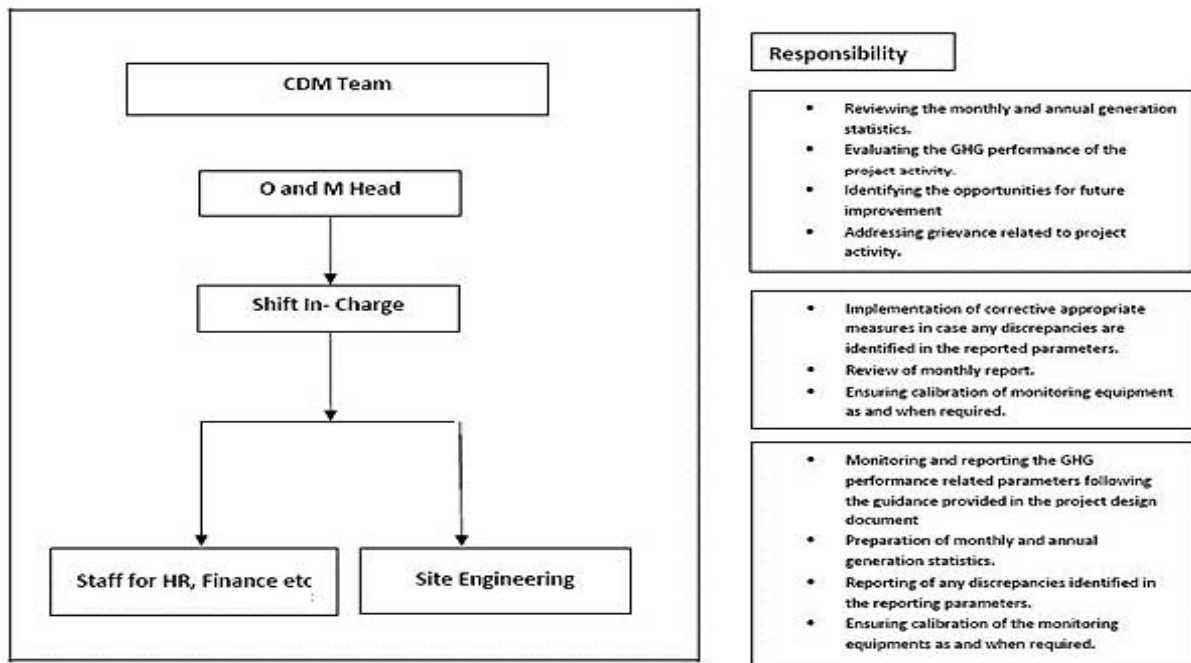
Data / Parameter	EG _{PJ,y}
Data unit	MWh/y

Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Source of data	Monthly joint meter reading reports
Description of measurement methods and procedures to be applied	The difference of final 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.
Frequency of monitoring/recording	Continuous measurement & monthly recording
Value monitored	34,158 MWh
Monitoring equipment	1. Avaada Energy Private Limited (28 MW) Meter Serial No : • 028689319 (Main meter) • 02874835 (Check meter) • 028689315 (Standby meter) Meter type: ABT meters Meter Make: Elster A1800 Accuracy Class: 0.2s
QA/QC procedures to be applied	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. The monthly electricity supplied/exported by the project activity in the JMR report is cross checked with the monthly invoices of sale. In the absence or delay in the meter calibration appropriate Guidelines is 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 does 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 the data	Calculation of baseline emissions
Calculation method	Thus, Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh
Comments	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.

4.3 Monitoring Plan

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

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



Data Measurement

The export and import energy is measured continuously using above mentioned Main and Check meters located at the substations. Readings of meters shall be taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement to PP, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity.

There are standby meters provided at the sites of Avaada Clean Energy Power Limited (5 MW) and Avaada Energy Private Limited (28 MW) which are used in case there are discrepancies in main meter readings.

For the period 1-Jan-2021 to 31-Aug-2021-, Main meter was found to be having CT/PT issues and hence readings of Standby meters are used for Avaada Clean Energy Power Limited (5 MW).

Data collection and archiving

Readings from meters are collected in the presence of the plant in-charge. Export and Import data would be recorded and stored in logs as well as in electronic form on a daily basis. The records are checked periodically by the Plant Manager and discussed thoroughly with the plant supervisor. The period of storage of the monitored data will be 2 years after the end of crediting period or till the last issuance of VERs for the project activity whichever occurs later.

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.

Personnel training

In order to ensure a proper functioning of the project activity and a properly monitoring of emission reductions, the staffs are 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.

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 crosschecked with the records of sold electricity to state electricity board. The meters are calibrated by state electricity board at-least once in five years.

Apportioning

In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from:

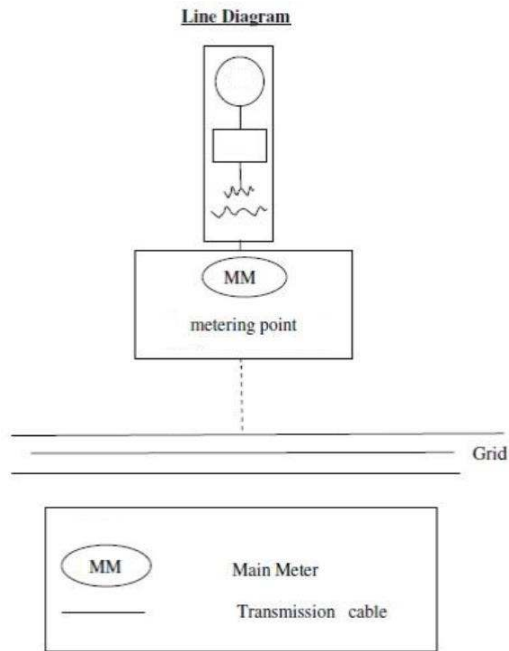
- Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate / JMR Report / Credit Notes certified by the respective state Discom, based on the number of days in the monitoring period and the number of days for which Share Certificate / JMR Report / Credit Notes was prepared.

During the current monitoring period, apportioning has not been done.

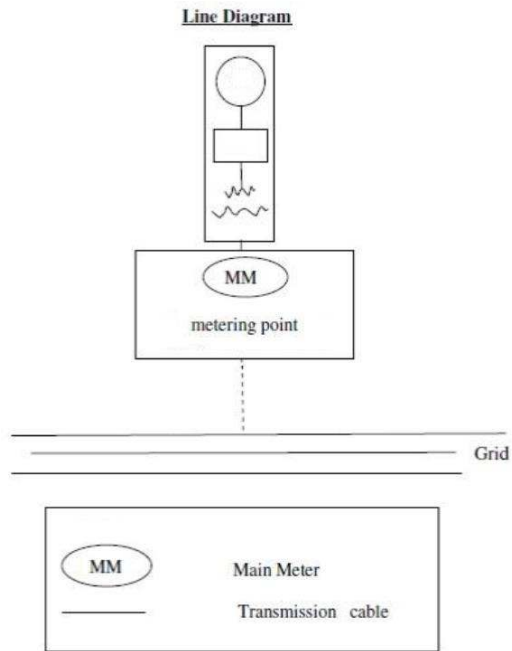
Metering Arrangement

Line diagram with metering arrangement for the solar project activity is shown below

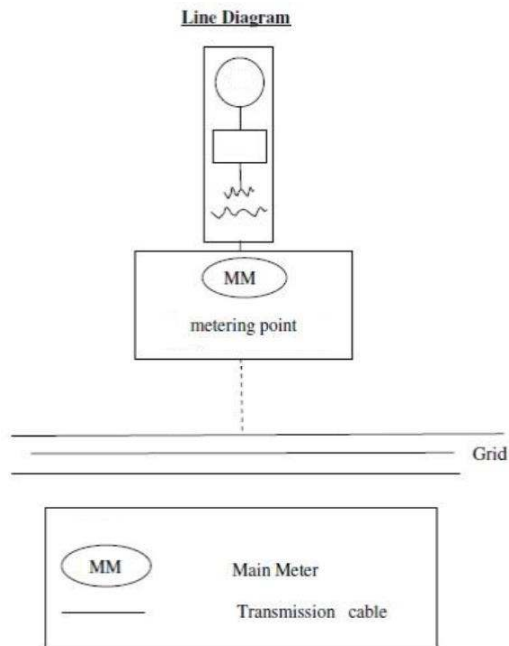
For Karnataka Site



For Kanpur (Uttar Pradesh) Site



For Maharashtra Site



5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

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

Where:

BE_y : Baseline emissions in year y (tCO₂e/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 VCS 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” (tCO₂e/MWh)

Parameter	Unit	Value
$EG_{PJ, y}$	MWh	204,491
$EF_{grid, CM, y}$	tCO ₂ e	0.9368
BE_y	=	204,491 * 0.9368
	=	191,567

5.2 Project Emissions

Not Applicable, since leakage emissions are zero as per ACM0002 methodology

5.3 Leakage

Not Applicable, since emissions from the project activity is zero as per ACM0002 methodology

5.4 Net GHG Emission Reductions and Removals

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2021	191,567	0	0	191,567
Total	191,567	0	0	191,567

Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD:

Amount achieved during this monitoring period (tCO ₂ e)	Amount estimated during this monitoring period (tCO ₂ e)
191,567	156,237

The baseline emissions in the current monitoring period are 22.6% higher than the estimated ex-ante emission reductions.

This monitoring period-from 1-Jan-2021 till 31-Aug-2021 cover only eight months of the year, hence the seasonal variations in the solar irradiations are not entirely captured in this period. The intense solar irradiations during the current monitoring period resulted in higher power generation, thus the baseline emissions during the monitoring period are considerably higher compared to estimated ex-ante emission reductions.

APPENDIX 1: METER AND CALIBRATION DETAILS

Avaada Sustainable Energy Private Limited (30 MW)

Meter Details	Main Meter	Check Meter
Meter Serial No	18015390	18015388
Meter Make	L&T	L&T
Accuracy Class	0.2s	0.2s
Date of Calibration	28-Feb-2018	28-Feb-2018
Due date of next calibration	27-Feb-2023	27-Feb-2023

Avaada Clean Energy Power Limited (5 MW)

Meter Details	Main Meter	Check Meter	Standby Meter
Meter Serial No	UPP67363	UPP67364	UPP67365
Meter Make	Secure	Secure	Secure
Accuracy Class	0.2s	0.2s	0.2s
Date of Calibration	21-Jul-2018	21-Jul-2018	21-Jul-2018
Due date of next calibration	20-Jul-2023	20-Jul-2023	20-Jul-2023

Avaada Energy Private Limited (28 MW)

Meter Details	Main Meter	Check Meter	Standby Meter
Meter Serial No	XC477938	XC477939	XC477940
Meter Make	Secure	Secure	Secure
Accuracy Class	0.2s	0.2s	0.2s
Date of Calibration	20-Mar-2018	20-Mar-2018	20-Mar-2018
Due date of next calibration	19-Mar-2023	19-Mar-2023	19-Mar-2023

The above meters were replaced with the below ones in Feb 2020.

Meter Details	Main Meter	Check Meter	Standby Meter
Meter Serial No	028689319	02874835	028689315
Meter Make	Elster A1800	Elster A1800	Elster A1800
Accuracy Class	0.2s	0.2s	0.2s
Date of Calibration	28-Nov-2019	28-Nov-2019	28-Nov-2019
Due date of next calibration	27-Nov-2024	27-Nov-2024	27-Nov-2024

Solarsys Non-Conventional Energy Private Limited (30 MW)

Meter Details	Main Meter	Check Meter
Meter Serial No	18015356	18015439
Meter Make	L&T	L&T
Accuracy Class	0.2s	0.2s
Date of Calibration	14-Nov-2018	14-Nov-2018
Due date of next calibration	13-Nov-2023	13-Nov-2023

Solarsys Non-Conventional Energy Private Limited (60 MW)

Meter Details	Main Meter	Check Meter
Meter Serial No	18015391	18015392
Meter Make	L&T	L&T
Accuracy Class	0.2s	0.2s
Date of Calibration	28-Mar-2019	28-Mar-2019
Due date of next calibration	27-Mar-2024	27-Mar-2024

APPENDIX 2: PLANT BREAKDOWNS

Solarsys Non-Conventional Energy Private Limited (60 MW)

S. No.	Functional Location	Equipment	Malfunction Start Date	Total Time	Text
1	Block -10	Inv-39	06-01-2021	0:17	Temperature Below 0 Degrees C or Humidity Above 90%
2	Block -09	Inv-33	08-01-2021	0:02	instantaneous over temperature on cabin 3
3	Block -09	Inv-33	08-01-2021	0:01	instantaneous over temperature on cabin 4
4	Block-03	Inv-12	11-01-2021	0:23	Shunt ground fault on section1 & Section2
5	Block 03	Inv-11	25-01-2021	1:11	Input & Output Liquid temperature too low
6	Block 02	Inv-07	08-02-2021	5:09	Power is being Limited by high temperature on section 01&02
7	Block 02	INV -7	09-02-2021	0:06	INV -7 Over Temperature on inductor 2
8	Block 04	INV-13	10-02-2021	1:22	INV-13 Instantaneous Over Temperature on Cabin-1
9	Block 04	INV-13	11-02-2021	0:30	INV-13 Instantaneous Over Temperature on Cabin-1
10	Block 04	inv -14	13-02-2021	0:15	inv -14 tripped Due to Door sensor problem
11	Block 11	Inv 42	14-02-2021	4:19	Liquid refrigrtion pump error
12	Block 05	Inv 17	14-02-2021	0:09	INV -17 Over Temperature on Cabin- 2
13	Block 04	Inv 13	16-02-2021	2:45	Liquid refrigrtion pump error
14	Block-4	INV-13	17-02-2021	0:03	INV-13 Instantaneous Over Temperature on Cabin-1
15	Block-4	INV-13	17-02-2021	0:03	INV-13 Instantaneous Over Temperature on Cabin-1
16	Block-4	INV-13	17-02-2021	0:03	INV-13 Instantaneous Over Temperature on Cabin-1
17	Block 07	Inv-28	19-02-2021	0:24	Inv-28 Shunt ground fault on section1&2
18	Block 11	Inv-42	21-02-2021	0:16	Door sensor problem
19	Block 05	Inv-17	25-02-2021	0:08	Over Temperature on cabin-2
20	Block 05	Inv-17	25-02-2021	0:15	CCU High Temperature
21	Block 11	Inv- 44	28-02-2021	0:17	Inv- 44 Shunt ground faults Section 1&2 From 14:14 to 14:31
22	Block 06	Inv- 22	28-02-2021	0:09	Inv- 22 Tripped on Over Temperature on Cabin 2 From 12:56 tom 13:05
23	Block 04	Inv- 15	28-02-2021	0:10	Inv- 15 Tripped on Over Temperature on Cabin 2 From 13:01 tom 13:11
24	Block 08	Inv- 31	28-02-2021	0:07	Inv- 31 Tripped on Over Temperature on Cabin 2 From 13:12 tom 13:19
25	Block 03	Inv- 09	28-02-2021	0:06	Inv- 09 Tripped on Over Temperature on Cabin 2 From 13:13 tom 13:19
26	Block 11	Inv- 42	28-02-2021	0:12	Inv- 42 Tripped on Over Temperature on Cabin 2 From 13:22 tom 13:34
27	Block 06	Inv- 21	28-02-2021	0:07	Inv- 21 Tripped on Over Temperature on Cabin 2 From 13:25 tom 13:32
28	Block 11	Inv- 41	28-02-2021	0:09	Inv- 41 Tripped on Over Temperature on Cabin 2 From 13:28 tom 13:37
29	Block 04	Inv- 13	28-02-2021	0:09	Inv- 13 Tripped on Over Temperature on Cabin 2From 13:38 tom 13: 47

S. No.	Functional Location	Equipment	Malfunction Start Date	Total Time	Text
30	Block 08	Inv- 32	28-02-2021	0:04	Inv- 32 Tripped on Over Temperature on Cabin 2 From 13:41 tom 13: 45
31	Block 08	Inv- 29	28-02-2021	0:02	Inv- 29 Tripped on Over Temperature on Cabin 2 From 13:50 tom 13: 52
32	Block 02	Inv-05	10-03-2021	0:09	Inv- 05 Tripped on Over Temperature on Cabin 2 From 13:21 to 13:30
33	Block 04	Inv-14	16-03-2021	0:14	Inv-14 Shunt ground faults section 1&2 From 09:13 to 09:27
34	Block 05	Inv-17	21-03-2021	0:15	Inv-17 Shunt ground faults section 1&2 From 13:20 to 13:35
35	Block 06	Inv-24	22-03-2021	#####	Inv-24 Liquid Pump refrigerator error
36	Block 02	Inv-06	23-03-2021	0:09	Inv-06 Over temperature inducator-01
37	Block 05	Inv-17	31-03-2021	0:07	Door Opened
38	Block 03	Inv 11	05-04-2021	0:05	Instantaneous over temperature at outdoor site & Instantaneous over temperature on cabin 1
39	Block 03	Inv 11	06-04-2021	0:05	Instantaneous over temperature at outdoor site & Instantaneous over temperature on cabin 1
40	Block 03	Inv 11	06-04-2021	0:05	Instantaneous over temperature at outdoor site
41	Block 03	Inv 11	06-04-2021	0:06	Instantaneous over temperature at outdoor site
42	Block 03	Inv 11	06-04-2021	0:05	Instantaneous over temperature at outdoor site
43	Block 03	Inv 11	07-04-2021	0:05	Instantaneous over temperature at outdoor site
44	Block 03	Inv 11	07-04-2021	0:06	Instantaneous over temperature at outdoor site
45	Block 03	Inv 11	07-04-2021	0:04	Instantaneous over temperature at outdoor site
46	Block 03	Inv 11	07-04-2021	0:04	Instantaneous over temperature at outdoor site
47	Block 03	Inv 11	08-04-2021	0:03	Instantaneous over temperature at outdoor site
48	Block 03	Inv 11	08-04-2021	0:05	Instantaneous over temperature at outdoor site
49	Block 04	Inv 14	10-04-2021	1:40	Door sensor problem
50	Block 09	Inv 34	10-04-2021	0:04	Instantaneous over temperature at outdoor site
51	Block 09	Inv 34	10-04-2021	0:05	Instantaneous over temperature at outdoor site
52	Block 09	Inv 34	10-04-2021	0:04	Instantaneous over temperature at outdoor site
53	Block 03	Inv 09	12-04-2021	0:12	Stopped due to Limiting Switch problem.
54	Block-11	Inv-41	15-04-2021	0:12	Shunt ground fault
55	Block 08	Inv-29	18-04-2021	3:23	Inv-29 Liquid Pump refrigerator error
56	Block 02	Inv 07	22-04-2021	0:12	Over Temperature on cabin-2
57	Block 09	Inv 34	26-04-2021	0:22	INV -34 Tripped Instantaneous Over Temperature at Outdoor site
58	Block-11	Inv-44	05-05-2021	6:54	ACB to Inverter 400sqmm Cable grounding
59	Block-10	Inv-39	05-05-2021	3:15	precharge contactor alarm on section -2
60	Block 04	Inv-15	15-05-2021	5:00	Inverter 15 tripped due to CCU Malfunction From 06:00 to 11:00
61	Block 04	Inv 14	27-05-2021	0:19	Shunt ground fault
62	Block 01	Inv 02	03-06-2021	0:20	Shunt ground fault
63	Block 02	Inv 08	03-06-2021	0:33	Shunt ground fault

S. No.	Functional Location	Equipment	Malfunction Start Date	Total Time	Text
64	Block 11	Inv 41	03-06-2021	0:44	Shunt ground fault
65	Block 11	Inv 42	03-06-2021	0:44	Shunt ground fault
66	Block 09	Inv 35	03-06-2021	2:02	Shunt ground fault
67	Block 03	Inv 12	03-06-2021	0:26	Shunt ground fault
68	Block 06	Inv 24	03-06-2021	0:24	Shunt ground fault
69	Block 03	Inv 12	03-06-2021	0:45	Shunt ground fault
70	Block 03	Inv 11	03-06-2021	0:03	Instantaneous over temperature at outdoor site
71	Block 03	Inv 11	03-06-2021	0:03	Instantaneous over temperature at outdoor site
72	Block 03	Inv 11	03-06-2021	0:03	Instantaneous over temperature at outdoor site
73	Block 03	Inv 11	03-06-2021	0:03	Instantaneous over temperature at outdoor site
74	Block 03	Inv 11	05-06-2021	2:00	Inv -11 Instantaneous Over Temperature at outdoor site From 06:00 to 08:00
75	Block 04	Inv 14	05-06-2021	0:28	Shunt ground fault
76	Block 03	Inv-11	06-06-2021	0:08	Inv- 11 Tripped on Over Temperature on Cabin 2 From 13:45 to 13:53
77	Block05	Inv-17	13-06-2021	0:12	due to CCU malfunction for over temp on cabin 2 .
78	Block 5	Inv-17	27-06-2021	0:20	Shunt ground fault
79	Block 10	Inv-37	01-07-2021	0:29	Shunt ground fault
80	Block 05	Inv-18	05-07-2021	1:07	Shunt ground fault
81	Block 02	Inv-07	08-07-2021	0:12	Shunt ground fault
82	Block 11	Inv-42	09-07-2021	0:09	Shunt ground fault
83	Block 11	Inv 42	14-07-2021	0:36	Shunt ground fault
84	Block 2	Inv-07	18-07-2021	0:25	GND Shunt ground fault
85	Block 3	Inv-12	19-07-2021	0:16	Shunt ground fault
86	Block 5	Inv-17	20-07-2021	0:18	Shunt ground fault
87	Block 02	Inv-07	03-08-2021	0:50	Grid contactor alarm on section-2
88	Block-9	Inv-33	04-08-2021	0:24	Instantaneous over temperature on cabin 3
89	Block-5	Inv-17	07-08-2021	0:16	Internal over temperature on CCU
90	Block 09	inv-33,34,35&36	30-08-2021	1:32	Cooling pump protection relay opened.
91	Block 09	Inv-34	31-08-2021	0:05	Instantaneous over temperature on cabin 3

Solarsys Non-Conventional Energy Private Limited (30 MW)

Sl.No	Functional Location	Equipment	Malfunction Date	Number of hours	Text
1	Block-3	Inverter-1	06-01-2021	00:10	Inverter tripped on Insulation Resistance
2	Block-1	Inverter-1	07-01-2021	00:36	Inverter tripped on Insulation Resistance
3	Block-2	IDT	08-01-2021	00:03	On Malfunction tripped
4	Block-4	Inverter-3	21-01-2020	00:10	Inverter tripped on Insulation Resistance
5	Block-3	inverter -2	09-02-2021	00:19	Inverter tripped on Fast power off command

Sl.No	Functional Location	Equipment	Malfunction Date	Number of hours	Text
					received
6	Block-3	Inverter-3	16-02-2021	00:10	Inverter tripped on Insulation Resistance
7	Block-1	Inverter-3	18-02-2021	00:09	Inverter tripped on Insulation Resistance
8	Block-4	Inverter-1	01-03-2021	00:29	Inverter tripped on BU current difference
9	Block-3	Inverter -2	05-03-2021	00:21	Inverter tripped on BU current difference
10	Block-2	Inverter -4	18-03-2021	00:26	Inverter tripped on BU current difference
11	Block-5	Inv-2	30-03-2021	00:18	Inverter tripped on Emergency stop F083
12	Block-2	IDT	31-03-2021	00:06	On Malfunction tripped
13	Block-4	Inv-1	05-04-2021	00:24	Inverter tripped on BU current difference
14	Block-1	Inverter-1	20-05-2021	00:35	Inverter tripped on BU current difference
15	Block-1	Inverter-3	21-05-2021	00:10	Inverter tripped on Insulation Resistance
16	Block-1	Inverter-2	29-05-2021	00:20	Inverter tripped on BU current difference
17	Block-3	Inverter-3	30-05-2021	00:31	Inverter tripped on BU current difference
18	Block-2	Inverter-2	12-06-2021	00:16	Inverter tripped on Insulation Resistance
19	Block-4	Inverter-3	19-06-2021	00:09	Inverter tripped on Insulation Resistance
20	Block-1	Inverter-4	20-06-2021	00:05	Inverter tripped on BU current difference
21	Block-1	Inverter-1	18-07-2021	00:06	Inverter tripped on AC Busbar Over temperature
22	Block-5	Inverter-1	26-07-2021	00:27	Inverter tripped on BU current difference
23	Block-5	Inverter-2	07-08-2021	00:31	Inv tripped on Ground High Volt (8199)
24	Block-2	Inverter-4	08-08-2021	00:07	Inverter tripped on DC Overcurrent detection
25	Block-2	Inverter-4	24-08-2021	00:08	Inverter tripped on Fast power off
26	Block-1	Inverter-2	25-08-2021	00:59	Inverter tripped on Grounding circuit over voltage
27	Block-1	Inverter-1	29-08-2021	00:10	Inverter tripped on Insulation Resistance

Avaada Energy Private Limited (28 MW)

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
1	Block-04	Inverters	11-01-2021	07:00	11-01-2021	10:45	Block-04 Inverter-01 tripped on PU communication
2	Block-05	Inverters	18-02-2021	13:15	18-02-2021	13:38	Block-05 Inverter-03 tripped on Insulation resistance
3	Block-03 INV-03	Inverters	20-02-2021	11:15	20-02-2021	11:38	Block-03, Inverter-03 tripped on excess temp difference
4	Block-04 INV-04	Inverters	20-02-2021	13:05	20-02-2021	13:25	Block-04, Inverter-04 tripped on Insulation

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
							resistance
5	Block-03, INV-02	Inverters	27-02-2021	12:56	27-02-2021	13:28	Block-03, Inverter-02 Measurement Circuit temperature
6	Block-03, INV-02	Inverters	28-02-2021	13:29	28-02-2021	13:51	INV tripped on LCL overheat
7	Block-03, INV-02	Inverters	01-03-2021	14:03	01-03-2021	14:24	INV tripped on LCL overheat
8	Block-03, INV-02	Inverters	03-03-2021	11:46	03-03-2021	12:25	Block-03, INV-02 tripped on LCL overheat
9	Block-05, INV-04	Inverters	03-03-2021	12:21	03-03-2021	12:39	Block-05, INV-04 tripped on AC Busbar Over Tem.
10	Block-03, INV-02	Inverters	04-03-2021	11:42	04-03-2021	12:07	Block-03, INV-02 tripped on LCL overheat
11	Block-03, INV-02	Inverters	05-03-2021	11:52	05-03-2021	13:04	Block-03, INV-02 tripped on LCL overheat
12	Block-03, INV-02	Inverters	06-03-2021	10:20	06-03-2021	11:10	Block-03, INV-02 manually stopped for LCL overheat RCA find out
13	Block-03, INV-02	Inverters	14-03-2021	12:10	14-03-2021	12:44	B-03, I-2 tripped on LCL overheat
14	Block-03, INV-02	Inverters	28-03-2021	12:15	28-03-2021	12:37	B-03, I-2 tripped on LCL overheat
15	Block-03, INV-02	Inverters	29-03-2021	11:51	29-03-2021	12:40	B-03, I-2 tripped on LCL overheat
16	Block-03, INV-02	Inverters	30-03-2021	12:20	30-03-2021	12:46	B-03, I-2 tripped on LCL overheat
17	Block-03, INV-02	Inverters	31-03-2021	11:21	31-03-2021	11:52	B-03, I-2 tripped on LCL overheat
18	Block-03, INV-02	Inverters	31-03-2021	12:33	31-03-2021	13:04	B-03, I-2 tripped on LCL overheat
19	Block-05, INV-04	Inverters	31-03-2021	14:10	31-03-2021	14:57	B-05, I-4 tripped due to "48V Buffer" fault.
20	Block-03, INV-02	Inverters	01-04-2021	12:30	01-04-2021	13:04	B-03, I-2 tripped on LCL overheat

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
21	Block-03, INV-02	Inverters	02-04-2021	11:15	02-04-2021	11:29	B-03, I-2 tripped on LCL overheat
22	Block-05, INV-01	Inverters	02-04-2021	14:25	02-04-2021	15:07	B-05, I-1 tripped on Insulation resistance
23	Block-07, INV-04	Inverters	02-04-2021	11:26	02-04-2021	11:43	B-07, I-4 tripped on Insulation resistance
24	All Inverters	Inverters	26-04-2021	15:36	26-04-2021	15:49	All inverters stop due to under voltage of grid supply i.e 220 KV To 179 KV
25	B-4/INV-1	Inverters	27-04-2021	11:43	27-04-2021	12:36	Block-04, INV-01 tripped on on Insulation resistance
26	All Inverters	Inverters	06-05-2021	14:25	06-05-2021	15:18	All inverters stop due to under voltage of grid supply i.e 220 KV To 179 KV
27	B-5/INV-4	Inverters	07-05-2021	12:45	07-05-2021	18:40	Block-05, INV-04 tripped on on Insulation resistance
28	B-7/INV-2	Inverters	08-05-2021	11:32	08-05-2021	13:15	Block-07, INV-02 tripped on BU Current Difference
29	220 KV S/W	Power Transformer-01	08-05-2021	18:00	09-05-2021	03:30	Power Transformer-01, Manually tripped for attend the oil leakage from N2 panel to Main tank pipe.
30	B-3/INV-1	Inverters	10-05-2021	16:00	10-05-2021	16:30	Block-03, INV-01 tripped on BU Current Difference
31	B-4/INV-2	Inverters	29-05-2021	11:35	29-05-2021	12:15	B-04, I-2 tripped on Insulation resistance
32	B-5/INV-3	Inverters	03-06-2021	09:47	03-06-2021	10:44	B-05, I-3 tripped on Insulation resistance
33	B-5/INV-1	Inverters	03-06-2021	13:46	03-06-2021	14:12	B-05, I-1 tripped on BU Current Difference
34	B-3/INV-1	Inverters	09-06-2021	13:15	09-06-2021	13:20	B-03, I-1 tripped on DC Overcurrent

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
35	B-3/INV-1	Inverters	13-06-2021	07:30	13-06-2021	09:30	B-03, I-1 tripped on BU Current Difference & AC Breaker tripped
36	B-3/INV-3	Inverters	14-06-2021	06:10	14-06-2021	09:23	B-03, I-3 tripped on PU communication
37	B-3/INV-1	Inverters	17-06-2021	09:51	17-06-2021	10:12	B-03, I-1 tripped on BU Current Difference
38	B-4/INV-3	Inverters	19-06-2021	15:55	19-06-2021	16:20	B-04, I-3 tripped on Insulation resistance
39	B-4/INV-3	Inverters	25-06-2021	14:55	25-06-2021	15:22	B-04, I-3 tripped on Insulation resistance
40	B-7/INV-3	Inverters	28-06-2021	15:10	28-06-2021	16:35	B-07, I-3 tripped on Insulation resistance
41	B-5/INV-4	Inverters	07-07-2021	14:43	07-07-2021	14:56	B-05, I-4 tripped on Insulation resistance
42	B-5/INV-3	Inverters	07-07-2021	14:54	07-07-2021	15:26	B-05, I-3 tripped on Insulation resistance
43	B-4/INV-3	Inverters	07-07-2021	14:57	07-07-2021	15:46	B-04, I-3 tripped on Insulation resistance
44	B-7/INV-3	Inverters	07-07-2021	15:02	07-07-2021	15:26	B-07, I-3 tripped on Insulation resistance
45	B-3/INV-3	Inverters	07-07-2021	16:21	07-07-2021	16:28	B-03, I-3 tripped on Insulation resistance
46	B-7/INV-4	Inverters	08-07-2021	17:16	08-07-2021	17:50	B-07, I-4 tripped on Insulation resistance
47	B-7/INV-3	Inverters	08-07-2021	17:19	08-07-2021	17:57	B-07, I-3 tripped on Insulation resistance
48	B-5/INV-4	Inverters	09-07-2021	14:49	09-07-2021	15:29	B-05, I-4 tripped on Insulation resistance
49	B-7/INV-3	Inverters	09-07-2021	15:17	09-07-2021	17:47	B-07, I-3 tripped on Insulation resistance
50	B-3/INV-3	Inverters	09-07-2021	15:42	09-07-2021	16:00	B-03, I-3 tripped on Insulation resistance

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
51	B-4/INV-3	Inverters	09-07-2021	16:18	09-07-2021	16:53	B-04, I-3 tripped on Insulation resistance
52	B-4/INV-3	Inverters	11-07-2021	07:26	11-07-2021	08:43	B-04, I-3 tripped on Insulation resistance
53	B-5/INV-4	Inverters	12-07-2021	06:10	12-07-2021	08:10	B-05, I-4 tripped on Insulation resistance
54	B-7/INV-3	Inverters	12-07-2021	16:24	12-07-2021	16:45	B-07, I-3 tripped on Insulation resistance
55	B-5/INV-4	Inverters	18-07-2021	15:26	18-07-2021	15:39	B-05, I-4 tripped on Insulation resistance
56	B-7/INV-3	Inverters	18-07-2021	16:30	18-07-2021	16:44	B-07, I-3 tripped on Insulation resistance
57	B-03/INV-2	Inverters	27-07-2021	08:20	27-07-2021	14:04	B-03, I-2 tripped on Memory unit FW load failed
58	B-03/INV-2	Inverters	01-08-2021	09:10	01-08-2021	09:23	B-03, I-2 tripped on BU Current Difference
59	B-03/INV-2	Inverters	01-08-2021	10:29	01-08-2021	10:38	B-03, I-2 tripped on BU Current Difference
60	B-03/INV-2	Inverters	01-08-2021	12:16	01-08-2021	12:32	B-03, I-2 tripped on Excess temperature difference
61	B-07/INV-3	Inverters	02-08-2021	13:49	02-08-2021	13:56	B-07, I-3 tripped on Insulation resistance
62	B-04/INV-1	Inverters	07-08-2021	12:03	07-08-2021	12:49	B-04, I-1 Tripped on BU Current difference
63	All Inverters	Inverters	14-08-2021	11:00	14-08-2021	11:18	All inverters stop due to under voltage of grid supply i.e 220 KV To 190 KV Approx.(32 KV Side 27.3 KV Approx reached)
64	All Inverters	Inverters	14-08-2021	11:24	14-08-2021	11:27	All inverters stop due to under voltage of grid supply i.e 220 KV To 191 KV Approx.(32 KV Side

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
							27.3 KV Approx reached)
65	B-7/INV-3	Inverters	14-08-2021	14:15	14-08-2021	14:44	B-07, I-3 tripped on Insulation resistance
66	B-04/INV-1	Inverters	18-08-2021	15:55	18-08-2021	16:17	B-04, I-1 tripped on Insulation resistance
67	B-07/INV-3	Inverters	18-08-2021	16:22	18-08-2021	17:29	B-07, I-3 tripped on Insulation resistance
68	B-03/INV-2	Inverters	25-08-2021	08:38	25-08-2021	09:02	B-03, I-2 tripped on Excess temperature difference
69	B-03/INV-2	Inverters	25-08-2021	10:13	25-08-2021	11:30	B-03, I-2 tripped on Excess temperature difference
70	B-03/INV-2	Inverters	26-08-2021	12:56	26-08-2021	13:10	B-03, I-2 tripped on LCL overheat
71	B-04/INV-2	Inverters	02-09-2021	06:50	02-09-2021	10:04	B-04, I-2 tripped on Memory unit FW Load fail
72	B-04/INV-3	Inverters	05-09-2021	07:21	05-09-2021	09:21	B-04, I-3 tripped on Insulation resistance
73	B-07/INV-3	Inverters	05-09-2021	07:30	05-09-2021	09:43	B-07, I-3 tripped on Insulation resistance
74	B-04/INV-1	Inverters	05-09-2021	08:00	05-09-2021	09:20	B-04, I-1 tripped on Insulation resistance
75	B-05/INV-3	Inverters	05-09-2021	08:10	05-09-2021	10:28	B-05, I-3 tripped on Insulation resistance
76	B-07/INV-4	Inverters	06-09-2021	16:03	06-09-2021	17:05	B-07, I-04 tripped on Insulation resistance
77	B-07/INV-3	Inverters	06-09-2021	16:27	06-09-2021	17:10	B-07, I-03 tripped on Insulation resistance
78	B-04/INV-1	Inverters	06-09-2021	17:10	06-09-2021	17:35	B-04, I-01 tripped on Insulation resistance
79	B-04/INV-3	Inverters	06-09-2021	17:10	06-09-2021	17:40	B-04, I-03 tripped on Insulation resistance
80	B-04/INV-1	Inverters	07-09-2021	10:53	07-09-2021	11:13	B-04, I-01 tripped on Insulation resistance

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
81	B-04/INV-1	Inverters	07-09-2021	11:31	07-09-2021	12:09	B-04, I-01 tripped on Insulation resistance
82	B-03/INV-3	Inverters	09-09-2021	11:33	09-09-2021	12:04	B-03, I-3 Tripped on BU Current difference
83	Block-05	IDT	09-09-2021	14:19	09-09-2021	14:30	B-05 IDT tripped on Over current (I>> 1.01)
84	Block-05	IDT	11-09-2021	10:57	11-09-2021	11:07	B-05 IDT tripped on Over current (I>> 1.01)
85	B-03/INV-2	Inverters	19-09-2021	13:08	19-09-2021	13:33	B-03, I-2 tripped on LCL overheat
86	Block-05	IDT	23-09-2021	10:58	23-09-2021	11:27	B-05 IDT tripped on Over current (I>> 0.99)
87	B-05/INV-4	Inverters	24-09-2021	11:42	24-09-2021	12:33	B-05, I-4 tripped on Short circuit fault
88	B-03/INV-2	Inverters	25-09-2021	11:36	25-09-2021	11:51	B-03, I-2 tripped on LCL overheat
89	B-03/INV-2	Inverters	26-09-2021	08:40	26-09-2021	09:22	B-03, I-2 tripped on BU Current Difference
90	B-03/INV-2	Inverters	27-09-2021	10:37	27-09-2021	11:30	B-03, I-2 tripped on BU Current Difference
91	B-04/INV-1	Inverters	27-09-2021	13:24	27-09-2021	13:29	B-04, I-1 tripped on Insulation resistance
92	B-07/INV-2	Inverters	30-09-2021	11:05	30-09-2021	11:44	B-07, I-2 Tripped on BU Current difference
93	B-03/INV-1	Inverters	04-10-2021	12:30	04-10-2021	12:46	B-03, I-1 tripped on BU Current Difference
94	B-04/INV-1	Inverters	05-10-2021	12:29	05-10-2021	12:51	B-04, I-1 tripped on Insulation resistance
95	B-04/INV-3	Inverters	06-10-2021	15:38	06-10-2021	15:48	B-04, I-3 tripped on Insulation resistance
96	B-03/INV-4	Inverters	10-10-2021	06:25	10-10-2021	11:04	B-03, I-4 tripped on Insulation resistance
97	B-05/INV-3	Inverters	10-10-2021	06:25	10-10-2021	09:35	B-05, I-3 tripped on Insulation resistance

Sl#	Functional Location	Equipment	Malfunction Start Date	Malfunction Start Time	Malfunction End Date	Malfunction End Time	Text
98	B-07/INV-3	Inverters	10-10-2021	08:01	10-10-2021	08:37	B-07, I-3 tripped on Insulation resistance
99	B-04/INV-3	Inverters	10-10-2021	13:42	10-10-2021	14:19	B-04, I-3 tripped on Insulation resistance
100	Block-03	IDT	13-10-2021	13:01	13-10-2021	17:02	Block - 03, IDT stopped due to power transformer breaker manually tripped (Oil drain pipe flash over and Oil drained from pipe)
101	Block-04	IDT	13-10-2021	13:01	13-10-2021	16:55	Block - 04, IDT stopped due to power transformer breaker manually tripped (Oil drain pipe flash over and Oil drained from pipe)
102	Block-05	IDT	13-10-2021	13:01	13-10-2021	17:00	Block - 05, IDT stopped due to power transformer breaker manually tripped (Oil drain pipe flash over and Oil drained from pipe)
103	Block-07	IDT	13-10-2021	13:01	13-10-2021	17:04	Block - 07, IDT stopped due to power transformer breaker manually tripped (Oil drain pipe flash over and Oil drained from pipe)
104	B-03/INV-1	Inverters	26-10-2021	15:04	26-10-2021	15:19	B-03, I-1 tripped on BU Current Difference
105	B-03/INV-1	Inverters	16-11-2021	06:25	16-11-2021	10:32	B-03, I-1 tripped on Grid Supply Abnormal
106	B-05/INV-1	Inverters	04-12-2021	14:28	04-12-2021	15:30	B-05, I-1 tripped on Insulation resistance
107	B-03/INV-2	Inverters	13-12-2021	09:13	13-12-2021	10:58	B-03, I-2 tripped on BU Current Difference

Avaada Sustainable Energy Private Limited (30 MW)

S. No	Functional Location	Equipment	Malfunction Start Date	Number of hours	Text
1	Block-2	Inv-4	4-Jan-21	00:12:00	Inverter tripping with ground fault
2	Block-3	Inv-2	14-Jan-21	00:28:00	Inverter tripping with ground fault
3	Block-5	Inv-4	26-Jan-21	01:38:00	Memory unit FW load loading Failed
4	Block-1	Inv-3	16-Feb-21	00:57:00	Inverter tripping with Grounding circuit over voltage
5	Block-5	Inv-4	6-Mar-21	00:08:00	Tripped due to IGBT Temperature Difference
6	Block-2	Inv-3	8-Mar-21	00:49:00	Inverter tripping with Grounding circuit over voltage
7	Block-2	Inv-3	10-Mar-21	00:32:00	Inverter tripping with Grounding circuit over voltage
8	Block-2	Inv-3	10-Mar-21	00:16:00	Inverter tripping with Grounding circuit over voltage
9	Block-2	Inv-3	11-Mar-21	00:11:00	Inverter tripping with Grounding circuit over voltage
10	Block-1	Inv-1	12-Mar-21	03:20:00	Tripped on DC contactor failed to close
11	Block-5	Inv-2	16-Mar-21	00:09:00	Inverter tripping with ground fault
12	Block-03	Inv-1	28-Mar-21	00:39:00	We checked & observed that in ISU-1 section filter fan phase sequence incorrect, so rectified the problem after inverter charged
13	Block-03	Inv-1	28-Mar-21	00:18:00	Tripped on LCL overheat
14	Block-02	Inv-1	3-Apr-21	01:47:00	Inverter Tripped on Ground fault
15	Block-02	Inv-1	3-Apr-21	00:19:00	Inverter Tripped on Reverse current fault
16	Block-01	Inv-1	15-Apr-21	00:18:00	Inverter Tripped on Ground fault
17	Block-01	Inv-1	18-Apr-21	00:40:00	Inverter tripped on BU current difference
18	Block-04	Inv-2	25-Apr-21	00:08:00	Inverter Tripped on Ground fault
19	Block-04	Inv-3	13-May-21	00:12:00	Inverter tripped on ground fault
20	Block-05	Inv-4	14-May-21	00:23:00	Inverter tripped on ground fault
21	Block-05	Inv-3	18-May-21	02:35:00	Inverter tripped on ground fault
22	Block-02	Inv-3	20-May-21	01:10:00	Inverter tripped on ground fault
23	Block-03	Inv-4	20-May-21	01:30:00	Inverter tripped on ground fault
24	Block-04	Inv-4	26-May-21	02:30:00	Inverter tripped on ground fault
25	Block-02	Inv-3	1-Jun-21	00:29:00	Block-2 INV-3 ISU-2 section Y phase fuse failure
26	Block-4	Inv-3	3-Jun-21	01:26:00	Malfunctioning of Emergency button
27	Block-4	Inv-3	3-Jun-21	00:27:00	Inverter tripped on ground fault
28	Block-02	Inv-1	3-Jun-21	00:52:00	Block-2 INV-1 ISU-2 section Y phase fuse failure
29	Block-03	Inv-2	3-Jun-21	00:35:00	Block-3 Inv-2 off condition due

S. No	Functional Location	Equipment	Malfunction Start Date	Number of hours	Text
					SMPS failed
30	Block-04	Inv-3	6-Jun-21	00:50:00	Inverter tripped on ground fault
31	Block-02	Inv-4	13-Jun-21	01:05:00	Inverter tripped on ground fault
32	Block-03	Inv-2	15-Jun-21	01:03:00	Inverter taken LC for software updation purpose
33	Block-04	Inv-3	16-Jun-21	00:14:00	Inverter Tripped on Ground fault
34	Block-04	Inv-3	24-Jun-21	02:22:00	Inverter Tripped on Ground fault
35	Block-04	Inv-3	30-Jun-21	00:55:00	Inverter Tripped on Ground fault
36	Block-04	Inv-1	4-Jul-21	00:15:00	Inverter Tripped on Ground fault
37	Block-03	Inv-2	7-Jul-21	01:11:00	Inverter Tripped on Ground fault
38	Block-03		7-Jul-21	00:08:00	Block-3 Tripped on manual call point
39	Block-02	Inv-2	11-Jul-21	00:13:00	Inverter Tripped on Ground fault
40	Block-04	Inv-4	12-Jul-21	00:44:00	Inverter tripped on BU current difference
41	Block-02	Inv-2	13-Jul-21	00:20:00	Inverter Tripped on Ground fault
42	Block-04	Inv-3	17-Jul-21	00:45:00	Inverter Tripped on Ground fault
43	Block-04	Inv-3	18-Jul-21	00:55:00	Inverter Tripped on Ground fault
44	Block-02	Inv-2	18-Jul-21	02:10:00	Inverter Tripped on Ground fault
45	Block-04	Inv-3	20-Jul-21	01:34:00	Inverter Tripped on Ground fault
46	Block-04	Inv-3	22-Jul-21	01:58:00	Inverter Tripped on Ground fault
47	Block-04	Inv-2	23-Jul-21	02:58:00	Inverter Tripped on Ground fault
48	Block-03	Inv-2	23-Jul-21	02:21:00	LCL Filter Fan failed
49	Block-04	Inv-3	8-Apr-21	00:35:00	Inverter Tripped on Ground fault
50	Block-02	Inv-1	9-Aug-21	00:44:00	Inverter Tripped on Ac contactor failed to close
51	Block-02	Inv-1	22-Aug-21	00:12:00	Inverter Tripped on Reverse current fault
52	Block-01	Inv-3	31-Aug-21	00:08:00	Inverter Tripped on Reverse current fault
53	Block-05	Inv-3	16-Sep-21	00:14:00	Inverter Tripped on Ground fault
54	Block-04	Inv-1	25-Sep-21	00:37:00	Inverter tripped on BU current difference
55	Block-05	Transformer	9-Oct-21	01:17:00	Block-5 IDT Transformer taken shutdown for Oil topup purpose
56	Block-05	Inv-3	12-Oct-21	00:11:00	Grounding circuit over voltage
57	Block-02	Inv-2	12-Oct-21	00:44:00	Grounding circuit over voltage
58	Block-02	Inv-1	12-Oct-21	00:05:00	Reverse current
59	Block-05	Inv-2	16-Oct-21	00:23:00	Grounding circuit over voltage
60	Block-05	Inv-2	17-Oct-21	00:17:00	Grounding circuit over voltage
61	Block-05	Inv-2	17-Oct-21	00:57:00	Grounding circuit over voltage
62	Block-05	Inv-4	18-Oct-21	00:12:00	Grounding circuit over voltage
63	Block-03	Inv-2	21-Oct-21	00:51:00	Inverter Tripped CH2 communication Lost

S. No	Functional Location	Equipment	Malfunction Start Date	Number of hours	Text
64	Block-05	Inv-3	25-Oct-21	00:31:00	Inverter Tripped on Ground fault
65	Block-2	Inv-1	26-Oct-21	01:04:00	Inverter taken shutdown for inspecting IGBT Module
66	Block-5	Inv-2	28-Oct-21	02:40:00	Found Control Transformer TB failed (2No's of TB and 2No's of 16amps Fuse replaced)
67	Block-4	Inv-2	30-Oct-21	00:12:00	Tripped on DC over current
68	Block-3	Inv-2	1-Nov-21	01:28:00	Inverter Tripped on Ground fault
69	Block-5	Inv-3	7-Nov-21	02:03:00	Tripped on Reduced Run
70	Block-5	Inv-3	9-Nov-21	00:56:00	Tripped on Reduced Run
71	Block-5	Inv-3	10-Nov-21	01:13:00	Tripped on Reduced Run
72	Block-5	Inv-3	15-Nov-21	02:58:00	Tripped on Reduced Run
73	Block-3	Inv-1	19-Nov-21	00:31:00	Inverter Tripped on Ground fault
74	Block-5	Inv-4	20-Nov-21	00:25:00	Inverter Tripped on Ground fault
75	Block-04	Inv-1	22-Nov-21	00:03:00	Tripped on ground fault
76	Block-04	Inv-1	22-Nov-21	00:10:00	Tripped on ground fault
77	Block-04	Inv-1	22-Nov-21	00:16:00	Tripped on ground fault
78	Block-04	Inv-1	23-Nov-21	00:10:00	Tripped on ground fault
79	Block-05	Inv-4	24-Nov-21	00:22:00	Tripped on ground fault
80	Block-05	Inv-3	16-Dec-21	00:49:00	Tripped on ground fault
81	Block-02	Inv-1	19-Dec-21	00:47:00	Tripped on ground fault

Avaada Clean Energy Power Limited (5 MW)

	AVAADA CLEAN ENERGY PVT. LTD.	Prepared By:-Vivek Tripathi
	KANPUR 5MW/7MWp SOLAR PV PLANT	Reviewed By:- R. B. Dwivedi
	BREAKDOWN INCIDENT REPORT	Format Issue Date:- 01.11.2018
DOC NO. : ACEPL/O&M/2021/07 DATE OF BREAKDOWN : 14-07-2021 TIME OF BREAKDOWN : 05:30 Hrs		DATE OF REPORT : 16-07-2021 DATE OF RESTORATION : 15-07-2021 TIME OF RESTORATION : 11:40 Hrs
A) Details of Affected Equipment : Name of Equipment : Inverter capacitor & 2 No's CT Installed location : Inverter 2 Frame 2 Equipment Serial No. : CT:18060424,20122996 Equipment Make : TBEA Equipment Model No : NA Component Affected : NA		
B) Details of breakdown incident : Inverter 2 tripped due to AC SENSOR FAULT.		
C) Corrective Action applied: Discussed with TBEA Team & found that 1 no. of capacitor & 2 No's of CT was faulty. Faulty items replaced with spare. Now inverter is running normally.		
D) Material Consumption: 1 Capacitor & 2 CT.		
E) OEM Requirement: 1 Capacitor & 2 CT.		
F) Previous breakdown history, if any: Yes Under Warranty/Not: (☒) Yes (☐) No		
G) Present Status: Affected Equipment restored : (☒) Under Breakdown : (☐)		
H) Likely Cause of Equipment Failure:		
I) Generation Loss : Approx. 15.79 Mwh		
J) Any Injury/ accident resulting from breakdown: Nil		
K) Enclosed photographs:  		
Prepared By : Subham Mondal Reviewed By : Mr. R.B. Dwivedi		



	AVAADA CLEAN ENERGY PVT. LTD.	Prepared By:-Vivek Tripathi
	KANPUR 5MW/7MWp SOLAR PV PLANT	Reviewed By:- R. B. Dwivedi
	BREAKDOWN INCIDENT REPORT	Format Issue Date:- 01.11.2018
		Procedure Reference No:- AVAADA/OP/O&M/04
DOC NO. : ACEPL/O&M/2021/09 DATE OF BREAKDOWN : 03-11-2021 TIME OF BREAKDOWN : 08:30 Hrs		DATE OF REPORT : 03-11-2021 DATE OF RESTORATION : 03-11-2021 TIME OF RESTORATION : 13:26 Hrs
A) Details of Affected Equipment : Name of Equipment : Inverter CT Equipment Make : TBEA Installed location : Inverter 2 Frame 1 Equipment Model No : NA Equipment Serial No. : CT:19110525 Component Affected : NA		
B) Details of breakdown incident : Inverter 2 tripped due to AC SENSOR FAULT.		
C) Corrective Action applied: Discussed with TBEA Team & found that 1 no. of CT was faulty. Faulty items replaced with sapare. Now inverter is running normally.		
D) Material Consumption: 1 CT.		
E) OEM Requirement: 1 CT.		
F) Previous breakdown history, if any: Yes Under Warranty/Not: (☒) Yes (☐) No		
G) Present Status: Affected Equipment restored : (☒) Under Breakdown : (☐)		
H) Likely Cause of Equipment Failure:		
I) Generation Loss : Approx. 5.95 Mwh		
J) Any Injury/ accident resulting from breakdown: Nil		
K) Enclosed photographs:  		
Prepared By : Subham Mondal Reviewed By : Mr. R.B. Dwivedi		



	AVAADA CLEAN ENERGY PVT. LTD.	Prepared By:-Vivek Tripathi
	KANPUR 5MW/7MWp SOLAR PV PLANT	Prepared Date:- R. B. Dwivedi
	BREAKDOWN INCIDENT REPORT	Format Issue Date:- 01.11.2018
		Procedure Reference No:- AVAADA/OP/O&M/04
DOC NO. : ACEPL/O&M/2021/08 DATE OF BREAKDOWN : 07-08-2021 TIME OF BREAKDOWN : 07-08-2021 at 10:25		DATE OF REPORT : 08-08-2021 DATE OF RESTORATION : 07-08-2021 TIME OF RESTORATION : 07-08-2021 at 18:45
A) Details of Affected Equipment : Name of Equipment : 300 sq mm DC Cable Installed location : SCB to Inverter Equipment Serial No. : NA Equipment Make : POLYCORE CABLES Equipment Model No : 1C X 300 sq mm DC cable Component Affected :		
B) Details of breakdown incident : SCB-19 (Positive) 300 sq mm dc cable got faulty.		
C) Corrective Action applied: 1-Planned for replaced damaged cable . 2- 250 Meter new cable laying done. 3- Insulation resistance testing done.Took into line at 18:45 Hrs.		
D) Material Consumption: 1- 300 sq mm 250 meter DC Cable. 2- 1 No's of 300 sq mm AL flat ring Lug. 3- 1 No's of 300 sq mm Bi-matalic flat ring Lug.		
E)OEM Requirement: 300 sq mm Ring & Straight Lugs.		
F) Previous breakdown history,if any: Nil Under Warranty/Not: () Yes (☒) No		
G) Present Status: Affected Equipment restored : (☒) Under Breakdown : ()		
H) Likely Cause of Equipment Failure:		
I) Generation Loss : Approx. 608.1 kW		
J) Any Injury/ accident resulting from breakdown: Nil		
K) Enclosed photographs:  		
Prepared By : Subham Mondal Reviewed By : Mr. R.B. Dwivedi		



	AVAADA CLEAN ENERGY PVT. LTD.	Prepared By:-Vivek Tripathi
	KANPUR 5MW/7MWp SOLAR PV PLANT	Reviewed By:- R. B. Dwivedi
	BREAKDOWN INCIDENT REPORT	Format Issue Date:- 01.11.2018
DOC NO. : ACEPL/O&M/2021/10 DATE OF BREAKDOWN : 05-11-2021 TIME OF BREAKDOWN : 13:49 Hrs		DATE OF REPORT : 06-11-2021 DATE OF RESTORATION : 06-11-2021 TIME OF RESTORATION : 13:54 Hrs
A) Details of Affected Equipment : Name of Equipment : Inverter CT Installed location : Inverter 2 Frame 1 Equipment Serial No. : CT:19110867 Equipment Make : TBEA Equipment Model No : NA Component Affected : NA		
B) Details of breakdown incident : Inverter tripped in AC CIRCULATION FAULT		
C) Corrective Action applied: Discussed with TBEA Team & found that 1 no. of CT was faulty. Faulty items replaced with spare. Now inverter is running normally. On 05/11/21, Inverter tripped in AC Circulation fault. As per TBEA person direction, DSP Card interchanged with DC SLOT 1 to DC SLOT 2. After that inverter was running. In next day (06/11/21), same fault came, then we have replaced the A phase CT & A phase IGBT replaced with Phase C. After that inverter was running normally.		
D) Material Consumption: 1 CT.		
E) OEM Requirement: 1 CT.		
F) Previous breakdown history, if any: Yes		
Under Warranty/Not: (☒) Yes (☐) No		
G) Present Status: Affected Equipment restored: (☒) Under Breakdown : (☐)		
H) Likely Cause of Equipment Failure:		
I) Generation Loss : Approx. 5.70 Mwh		
J) Any Injury/ accident resulting from breakdown: Nil		
K) Enclosed photographs: 		
Prepared By : Subham Mondal Reviewed By : Mr. R.B. Dwivedi		



APPENDIX 3: COMPANY NAME CHANGE CERTIFICATE



GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

Office of the Registrar of Companies

RoC Bhavan, Opp Rupal Park Society Behind Ankur Bus Stop, Ahmedabad, Gujarat, India, 380013

Certificate of Incorporation pursuant to change of name
[Pursuant to rule 29 of the Companies (Incorporation) Rules, 2014]

Corporate Identification Number (CIN): U80221GJ2007PTC052487

I hereby certify that the name of the company has been changed from GIRIRAJ RENEWABLES PRIVATE LIMITED to AVAADA ENERGY PRIVATE LIMITED with effect from the date of this certificate and that the company is limited by shares.

Company was originally incorporated with the name ESVEEGEE EDUCOM (GUJARAT) PRIVATE LIMITED.

Given under my hand at Ahmedabad this First day of January two thousand nineteen.

MINISTRY
OF CORPORATE
AFFAIRS 05

SUDHIR LILADHAR PHAYE
Deputy RoC
Registrar of Companies
RoC - Ahmedabad

Mailing Address as per record available in Registrar of Companies office:

AVAADA ENERGY PRIVATE LIMITED

304, SHOPPERS PLAZA, OPP. MUNICIPAL MARKET, C. G. ROAD, NAVRANGPURA,
AHMEDABAD, Ahmedabad, Gujarat, India, 380009



For AVAADA ENERGY PRIVATE LIMITED

Company Secretary