

SOLAR GROUPED PROJECT BY ACME GROUP (EKIESL-VCS-AUG-16-01)



Document Prepared By EKI Energy Services Ltd.

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The grouped project activity is a step towards supporting the implementation and installation of grid connected renewable energy power plants in India. The grouped project activity ensures energy security, diversification of the grid generation mix and sustainable growth of the electricity generation sector in India.

The main goal of grouped project activity is to implement renewable energy projects in the country and the significant importance of revenues from sale of Verified Carbon Units (VCUs) to achieve this goal forms the basis of the implementation of this grouped project activity. The grouped project activity is a voluntary action and each SPV is the Project Proponent for their project activity Instance. ACME Group as a parent company formed different SPV (Special Purpose Vehicles) for solar projects and projects are developed by name of SPVs. There are no mandatory laws or regulations existing in India requiring PP or any other party to develop a programme for renewable generation plants.

The grouped project activity supports the development of new grid-connected renewable energy power plants in India and will cover the solar energy technologies. It seeks to enable investment in large scale and small scale grid connected plants that export their generated output to the regional / national electricity grid in India.

All the project instances i.e. renewable energy generation solar PV plants included in this grouped project are from within India only. Hence, the location and geographical boundary of the grouped project has been defined as India. The estimated annual emission reductions over a 10 year period of first crediting period from initial 11 project activity instances are 730,457 tCO₂e/year. The total emission reductions for 10 years crediting period will be 7,304,570 tCO₂e.

It is to be noted that SPV - Mihit Solar Power Private Ltd have three projects (25 MW + 25 MW + 24 MW = 74 MW) in Punjab state and all these three projects are considered under single project activity instance.

All 11 project activity instances are commissioned and the commission dates are mentioned in section 1.8 of this document.

The details of 11 project activity instances involved in current monitoring period are as below

Project Activity instance	PP (SPV) Name	MW	COD
1	Mihit Solar Power Private Ltd. 25 MW	25	21/03/2016
	Mihit Solar Power Private Ltd. 25 MW	25	21/03/2016
	Mihit Solar Power Private Ltd. 24 MW	24	28/02/2016 (for 11.5 MW) 30/03/2016 (for 12.5 MW)
2	ACME Jaisalmer Solar Power Pvt. Ltd.	20	12/05/2016
3	Aarohi Solar Pvt. Ltd.	50	29/03/2016
4	Dayanidhi Solar Power Pvt. Ltd.	40	01/04/2016
5	Niranjana Solar Energy Pvt. Ltd.	20	31/03/2016

Project Activity instance	PP (SPV) Name	MW	COD
6	Vishwatma Solar Energy Pvt Ltd.	30	02/04/2016 (for 10 MW)
			30/04/2016 (for 20 MW)
7	Acme Raipur Solar Power Pvt. Ltd.	30	09/01/2016 (for 23 MW)
			15/03/2016 (for 7 MW)
8	Dayakara Solar Power Pvt Ltd	30	21/06/2016
9	Grahati Solar Energy Pvt Ltd	50	20/07/2016 (for 20 MW)
			03/08/2016 (for 30 MW)
10	Acme Odisha Solar Power Pvt Ltd	25	22/06/2015
11	Eminent Solar Power Pvt Ltd.	12.5	09/02/2017
Total Capacity		381.5	

The total GHG Emission reductions generated in current monitoring period of 01/10/2018 to 31/08/2019 are 626,414 tCO₂e. No More project activity instance is included in the grouped project activity during current monitoring period.

Scenario existing prior to the implementation of project activity:

The scenario existing prior to the implementation of the project activity instances, is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".

Baseline Scenario:

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

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

The baseline scenario is that the 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 into the grid.

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

Technical Specifications of the 11 project activity instances

1. Mihit Solar Power Private Ltd.
 - a) Mihit Solar Power Private Ltd kherakhurd 25 MW

Technical detail of the equipment	Remark
Technology	Photovoltaic cell Seasonal tilt 5&25
Solar photovoltaic module	250,255,260Wp Modules of make - BYD/TELESON
No. of modules	102792
Total Number of Invertors	29 Units
Transformer numbers and KVA ratings	11 T/F & 5 T/F-5KVA&5 T/F -4008KVA&1T/F-22500 KVA
Central inverters of nominal AC power, output KVA rating , make etc	SCHNIDER-680 KVA
Technical & Operational Lifetime	25 years

b) Mihit Solar Power Private Ltd. Mankhera 25 MW

Technical detail of the equipment	Remark
Technology	Polycrystalline modules, seasonal tilt (Oct to March- 25°, April to Sep- 5°)
Solar photovoltaic module	Talesun-255Wp Talesun-260 Wp BYD-250 Wp BYD-255Wp BYD-260 Wp
No. of modules	102912
Total Number of Invertors	29
Transformer numbers and KVA ratings	Power transformer: 22.5/25 MVA (1 Nos), Aux. Trafo: 100 KVA (1 Nos), Inv. Trafo.: 4080 KVA (5 Nos) Aux Trafo. ICR: 5 KVA (5 Nos)
Central inverters of nominal AC power, output KVA rating , make etc	680 KVA Conext Core XC series Make:- Schneider
Technical & Operational Lifetime	25 years

c) Mihit Solar Power Private Ltd. Jhandekalan 24 MW

Technical detail of the equipment	Remark
Technology	Polycrystalline modules on Seasonal Tilt 25 degree & 5 degree.
Solar photovoltaic module	Waree China - 250wp (37915 Nos.) Waree China - 255wp (1826 Nos.) Waree China - 260wp (4563 Nos.) Waree China - 265wp (182 Nos.) Waree India - 250wp (12750 Nos.) Waree India - 255wp (24492 Nos.) Waree India - 260wp (14400 Nos.) TELSUN - 260wp (3136 Nos.)
No. of modules	99264
Total Number of Invertors	19 Units

Transformer numbers and KVA ratings	Power transformer: 25000 KVA(1 Nos)-Make: Schneinder Aux. Trafo: 100 KVA(1 Nos)-Make: GTB(Ludhiana) Inv. Trafo: 4000 KVA(5 Nos)-Make: Sudhir Aux. Trafo ICR: 5KVA(5 Nos)-Make: Shivalic
Central inverters of nominal AC power, output KVA rating , make etc	1000 KW, ABB - Total 12 Nos. 1000 KW, TBEA - Total 7 Nos.
Technical & Operational Lifetime	25 years

2. ACME Jaisalmer Solar Power Pvt. Ltd., Rayachoti (20 MW)

Technical detail of the equipment	Remark
Technology	Polycrystal modules on Seasonal Tilt at 3 degrees and 15 degrees
Solar photovoltaic module	250Wp Modules of make - BYD, 255Wp Modules of make -BYD, 260Wp Modules of make -BYD, 260Wp Modules of make - Talesun
No. of modules	99096
Total Number of Invertors	20 Units
Transformer numbers and KVA ratings	4 Nos - 4MVA, 2 Nos - 2MVA, 1Nos-100KVA
Central inverters of nominal AC power, output KVA rating , make etc	1MVA-ABB - 16Nos, 1MVA - TBEA - 4 Nos.
Technical & Operational Lifetime	25 years

3. Aarohi Solar Pvt. Ltd., Hindupur (50 MW)

Technical detail of the equipment	Remark
Technology	1) Thin film - CIS technology, 2) Crystalline.
Solar photovoltaic module	Thin film- 165 Wp, 170 Wp Modules of make - Solar Frontier. Crystalline - 265 Wp, 270 Wp TALESUN.
No. of modules	334752 No's
Total Number of Invertors	50 Units
Transformer numbers and KVA ratings	12-4MVA,1-2MVA,2-25MVA Power Trafo.
Central inverters of nominal AC power, output KVA rating , make etc	each 1 MVA ABB make inverters.
Technical & Operational Lifetime	25 years

4. Dayanidhi Solar Power Pvt. Ltd., Shanthipuram (40 MW)

Technical detail of the equipment	Remark
Technology	Poly Crystalline 3 Deg & 15 Deg (Seasonal Tilt)
Solar photovoltaic module	BYD, TALESUN(250W,255W,260W)
No. of modules	188232
Total Number of Invertors	38 No's (In operation), 3 No's (Not in Operation) using As spare
Transformer numbers and KVA ratings	20MVA(2Power Trafo's),4 MVA (9 Trafo's) & 2 MVA (1 Trafo),100KVA (2 Trafo's) Spare:-

	2MVA(1 Trafo),100KVA(1Trafo)
Central inverters of nominal AC power, output KVA rating , make etc	ABB:-14 No's PVS 800-57-1000KW-C TBEAA:-24NO's TBEA1000KH-M
Technical & Operational Lifetime	25 years

5. Niranjana Solar Energy Pvt. Ltd., Pathikonda (20 MW)

Technical detail of the equipment	Remark
Technology	Poly Crystalline modules on Seasonal Tilt at 3 & 15 degrees
Solar photovoltaic module	250,255&260 Wp Modules of make - BYD&Talesun
No. of modules	97872
Total Number of Invertors	20
Transformer numbers and KVA ratings	BO-15-455-1 ->2000KVA, BO-15-455-2 ->2000KVA, BO-15-454-1->4000KVA, BO-15-454-2 ->4000KVA, BO-15-454-3->4000KVA, BO-15-454-4 ->4000KVA,
Central inverters of nominal AC power, output KVA rating , make etc	Inverters -1000KW ,Make -ABB
Technical & Operational Lifetime	25 years

6. Vishwatma Solar Energy Pvt Ltd., Yemmiganur (30 MW)

Technical detail of the equipment	Remark
Technology	Polycrystalline modules silicon technology with seasonal Tilt at 3 and 15 degrees
Solar photovoltaic module	250,255 and 260 Wp Modules of make - BYD and TELESUN
No. of modules	143376
Total Number of Invertors	30 Units
Transformer numbers and KVA ratings	1 in no 30MVA,7 in no 4MVA,1 in no 2MVA and 1 in no 100KVA
Central inverters of nominal AC power, output KVA rating , make etc	1100KVA, 26 in no TBEA make and 4 in no ABB make
Technical & Operational Lifetime	25 years

7. Acme Raipur Solar Power Pvt. Ltd., Bagbera (30 MW)

Technical detail of the equipment	Remark
Technology	Thin Film-CdTe modules on variable Tilt at 5 Sep _ Apr and 21 Apr to Sep
Solar photovoltaic module	Talesun & BYD - 250,255 &260
No. of modules	118776
Total Number of Invertors	28
Transformer numbers and KVA ratings	Main Power transformer 1 Make ABB 25/30 MVA
Central inverters of nominal AC power, output KVA rating , make etc	24 ABB 1000KW & 6 SUNGRO 630KW Inverter Transformer Raychem RPG 6 nos. – 4MVA & 1 no. -2.5MVA

Technical & Operational Lifetime	25 years
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8. Dayakara Solar Power Pvt Ltd., Maddur (30 MW)

Technical detail of the equipment	Remark
Technology	Poly Crystalline modules - Silicon technology on seasonol Tilt at 3 & 23 degrees
Solar photovoltaic module	250W, 255W`` Wp Modules of make - BYD 255W, 260W, 265`` Wp Modules of make - RISEN 260W, 265W`` Wp Modules of make - SUNTECH 255W, 260W, 265W`` Wp Modules of make TALESUN
No. of modules	1,49,256
Total Number of Invertors	30 Units
Transformer numbers and KVA ratings	30MVA - 1 No's , 4MVA- 7 No's, 2MVA- 1 No's, 100KVA - 1 No's
Central inverters of nominal AC power, output KVA rating , make etc	TMeiC - 1MW - 22 No's ABB Make - 1MW - 8 No's
Technical & Operational Lifetime	25 years

9. Grahati Solar Energy Pvt Ltd., Balanagar (50 MW)

Technical detail of the equipment	Remark
Technology	Solar Photo voltaic module modules on seasonal tilting
Solar photovoltaic module	250,255,260,265 Wp Modules of make - BYD,RISEN SUNTECH TALESUN
No. of modules	249648
Total Number of Invertors	50
Transformer numbers and KVA ratings	25MVA-2,4MVA-8,2MVA-8,1MVA-2,50KVA-2
Central inverters of nominal AC power, output KVA rating , make etc	380V 1000KW
Technical & Operational Lifetime	25 years

10. Acme Odisha Solar Power Pvt Ltd, Balongir, Odisha (25 MW)

Technical detail of the equipment	Remark
Technology	POLY CRYSTALLINE MODULE WITH SEASONAL TILTING (5,21 DEGREES)
Solar photovoltaic module	250,255 & 260 Wp module of trina solar
No. of modules	118992
Total Number of Invertors	37
Transformer numbers and KVA ratings	Inverter transformer: 9 nos (2720 KVA,380V/11kv) + 1 nos (700 KVA, 340V/11kv) Power transformer: 1 nos (25/30 MVA, 11kv/132kv)

Central inverters of nominal AC power, output KVA rating , make etc	33 nos of schneider (680kw, output: 380V)+ 4 nos of TBEA (630 kw,output:340V)
Technical & Operational Lifetime	25 years

11. Eminent Solar Power Pvt Ltd., Udham Singh Nagar District, Uttarakhand (12.5 MW)

Technical detail of the equipment	Remark
Technology	photovoltaic modules on Fixed Tilt at 15 degrees and 3 degrees
Solar photovoltaic module	260 Wp & 265 Wp Modules of make - Telsun
No. of modules	59256
Total Number of Invertors	12 Units
Transformer numbers and KVA ratings	2 x 4 MVA & 1 x 4.5 MVA
Central inverters of nominal AC power, output KVA rating , make etc	(380V AC, 1.1 MWp, Inverter make:-TBEA)
Technical & Operational Lifetime	25 years

1.2 Sectoral Scope and Project Type

The project activity under consideration is a grouped project activity. The project activity instances as part of the grouped project will have following parameters

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

Project Type: I - Renewable Energy Projects

Project Category:

Each project activity instances is of solar technology. However, each project activity instances will be either small scale or large scale but not the combination of two.

For large scale project activities, below large scale methodology is applied

Title: ACM0002 Grid-connected electricity generation from renewable sources- Version 17.0

Reference: ACM0002 Version 17

For small scale project activities, below small scale methodology is applied

AMS-I.D.: Grid connected renewable electricity generation- Version 18.0

1.3 Project Proponent

Organization name	Mihit Solar Power Private Ltd.
Contact person	Gursharan Jassal
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	ACME Jaisalmer Solar Power Pvt. Ltd.
Contact person	Gursharan Jassal
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Aarohi Solar Pvt. Ltd
Contact person	Jyoti Arora
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Dayanidhi Solar Power Pvt. Ltd.
Contact person	Manish Karna
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Niranjana Solar Energy Pvt. Ltd.
Contact person	Yudhvir Singh Gulia
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Vishwatma Solar Energy Pvt Ltd.
Contact person	Ashish K. Saxena
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Acme Raipur Solar Power Pvt. Ltd.
Contact person	Rajesh Sodhi
Title	Director

Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Dayakara Solar Power Pvt Ltd
Contact person	Rajesh Sodhi
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Grahati Solar Energy Pvt Ltd
Contact person	Jyoti Arora
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Acme Odisha Solar Power Pvt Ltd
Contact person	Gursharan Jassal
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

Organization name	Eminent Solar Power Pvt. Ltd
Contact person	Gursharan Jassal
Title	Director
Address	Plot No.152, Sector – 44, Gurgaon -122 002, Haryana, India
Telephone	-
Email	-

1.4 Other Entities Involved in the Project

Organization name	EKI Energy Services Ltd.
Role in the project	Project Consultancy
Contact person	Mr. Kingshuk Das
Title	Project manager

Address	Office No 201, Plot No 48, Scheme 78, Part 2, Vijay Nagar, Indore- 452010, Madhya Pradesh, India
Telephone	+919589899649
Email	kingshuk@enkingint.org

1.5 Project Start Date

The first project activity instance of the grouped project under consideration was commissioned and power generation started on 22/06/2015. This project activity instance is SPV- Acme Odisha Solar Power Pvt Ltd under ACME group having installed capacity of 25 MW. Hence, the project start date is defined as follows:

Project start date: 22/06/2015

1.6 Project Crediting Period

Project crediting period for grouped project activity is taken as 10 years renewable twice.

Accordingly the start date of the first crediting period is 22/06/2015 and end date will be 21/06/2025.

Hence, the first crediting period is from 22/06/2015 to 21/06/2025.

Current monitoring period is MP04 from 01/10/2018 to 31/08/2019 (both days included).

1.7 Project Location

All the project activity instances in the proposed grouped project activity would be located within geographical boundaries of Republic of India. Thus geographical area of grouped project is India.

The geographical boundary is delineated in the form of extreme geographic coordinates as follows:¹

The geographical boundary is delineated in the form of extreme geographic coordinates of India country as follows

Latitude- 8° 4' to 37° 6' N

Longitude- 68° 7' to 97° 25' E

Please refer below web link for the range of co-ordinates

https://en.wikipedia.org/wiki/Geography_of_India

The kml file for India is submitted to DOE.

The map of India is as indicated in the following figure:

¹ Precise latitude and longitude details of each project instances are provided in section 2.1 of this monitoring report.



1.8 Title and Reference of Methodology

The methodology for large scale project activity instances is the approved methodology for large-scale CDM project activities. The details of the methodology are as follows:

Methodology: ACM0002

Project Type: Type-I: Renewable Energy Projects

Title: Grid-connected electricity generation from renewable sources

Version No.: Version 17;

Reference: CDM Methodology:

<https://cdm.unfccc.int/methodologies/DB/8W400U6E7LFHHYH2C4JR1RJWWO4PVN>

The methodology refers to following CDM Tools:

- Tool for the demonstration and assessment of additionality² (Version 07.0.0)
- Tool to calculate emission factor for an electricity system³ (Version 05.0)

² <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

³ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf>

The methodology for small scale project activity instances is the approved methodology for small-scale CDM project activities. The details of the methodology are as follows:

Methodology: AMS I.D

Project Type: Type-I: Renewable Energy Projects

Title: Grid connected renewable electricity generation

Version No.: Version 18;

Reference: CDM Methodology:

<https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTFQOQFQQH4SBK>

The methodology refers to following CDM Tools:

- Tool to calculate emission factor for an electricity system⁴ (Version 05.0)

1.9 Other Programs

Not Applicable, as the project activity is not registered with any other program.

The undertaking from PP has been submitted for no any double accounting for current monitoring period and project activity is not participated any other GHG program other than VCS.

The project activity is not availing any REC benefits and the same can be confirmed from publically available link of REC generators.

Web-link: https://www.recregistryindia.nic.in/index.php/general/publics/registered_regens

1.10 Sustainable Development

Apart from generation of renewable electricity, the grouped project activity and project activity instances proposed to be included under it would contribute to the sustainable development of the region - socially, environmentally and economically. Ministry of Environment and Forests (MoEF), Government of India, has stipulated the following indicators for sustainable development.

1. Social well-being;
2. Economic well-being;
3. Environmental well-being; and
4. Technological well-being

Social well-being

- The project activity instances under grouped project activity results in creating job opportunities for the local population on temporary and permanent basis. Manpower is required both during erection and operation of the renewable energy projects. This would result in the improvement in living standards of the local community.

⁴ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf>

- The installation of the renewable energy projects also led to development of basic infrastructure like roads, communication with the nearby cities etc. which also improved in living standards of the local population.

Economic well-being

- The project activity instances under grouped project activity creates direct and indirect job opportunities to the local community during installation and operation of the renewable energy projects.
- The investment for the project activity instances under grouped project activity would lead to the improvement in the economic activity in the local area.

Environmental well-being

The project activity instances under grouped project activity utilizes renewable energy for generating electricity which otherwise would have been generated through alternate fuel (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions of pollutant/unit of energy generated) including GHG emissions. As renewable energy projects produce no end products in the form of solid waste (ash etc.), they address the problem of solid waste disposal encountered by most other sources of power. Being a renewable resource, to generate electricity contributes to resource conservation. Thus the project causes no negative impact on the surrounding environment.

Technological well-being

- Clean technology transfer in renewable energy generation and optimal use of renewable energy in the industry.
- There is no any provision is required to monitor and report these sustainable development indicators as per national rules and regulations.

2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

The geo co-ordinates and the commissioning information of each instances of the project activity are mentioned in the table below

PP Name	MW	State	Project Location	Latitude (N)	Longitude (E)
Mihit Solar Power Private Ltd.	25	Punjab	Kherakhurd	29.66	75.26
Mihit Solar Power Private Ltd.	25	Punjab	Mankhera	29.59	75.24
Mihit Solar Power Private Ltd.	24	Punjab	Jandekalan	29.62	75.20

ACME Jaisalmer Solar Power Pvt. Ltd.	20	Andhra Pradesh	Raichotti	14.11	78.78
Aarohi Solar Pvt. Ltd.	50	Andhra Pradesh	Hindupur	13.98	77.48
Dayanidhi Solar Power Pvt. Ltd.	40	Andhra Pradesh	Shantipuram	12.88	78.38
Niranjana Solar Energy Pvt. Ltd.	20	Andhra Pradesh	Patthikonda	15.36	77.49
Vishwatma Solar Energy Pvt Ltd.	30	Andhra Pradesh	Yemmiganur	15.67	77.47
Acme Raipur Solar Power Pvt. Ltd.	30	Chattishgarh	Bagbera	21.12	82.48
Dayakara Solar Power Pvt Ltd	30	Telangana	Maddur	16.88	77.58
Grahati Solar Energy Pvt Ltd	50	Telangana	Balanagar	16.93	78.13
Acme Odisha Solar Power Pvt Ltd	25	Odisha	Balongir,	20.54	83.38
Eminent Solar Power Pvt Ltd.	12.5	Uttarakhand	Uddham Singh Nagar	29.2	79.1

The location details of each instances of the project activity is mentioned in the table below

SPV Name	MW	State	Project Location /Sub Station	Village	Tehsil	District
Mihit Solar Power Private Ltd.	25	Punjab	Kherakhurd	Khaira Khurd	Sardulgarh	Mansa
Mihit Solar Power Private Ltd.	25	Punjab	Mankhera	Mankhera	Sardulgarh	Mansa
Mihit Solar Power Private Ltd.	24	Punjab	Jandekalan	Jhande Kalan	Sardulgarh	Mansa
ACME Jaisalmer Solar Power Pvt. Ltd.	20	Andhra Pradesh	Rayachoti	Pothukurupalli	Ramapuram Mandal	Kadapa
Aarohi Solar Pvt. Ltd.	50	Andhra Pradesh	Hindupur	Kalipi	Roddam Mandal	Anathapur
Dayanidhi Solar Power Pvt. Ltd.	40	Andhra Pradesh	Shanthipuram	Gunjarlapalle & Morasanapalle	Shanthipuram Mandal	Chittoor
Niranjana Solar Energy Pvt. Ltd.	20	Andhra Pradesh	Pathikonda	Puchakayalamanda	Pathikonda Mandal	Kurnool
Vishwatma Solar Energy Pvt Ltd.	30	Andhra Pradesh	Yemmiganur	Kadivella	Yemmiganur	Kurnool
Acme Raipur	30	Chattishgarh	Bagbera	Bhikapali	Bagbahara	Mahasamund

Solar Power Pvt. Ltd.						
Dayakara Solar Power Pvt Ltd	30	Telangana	Maddur	Damkanpur	Maddur	Mehbubnagar
Grahati Solar Energy Pvt Ltd	50	Telangana	Balanagar	Narellapalli	Balanagar	Mehbubnagar
Acme Odisha Solar Power Pvt Ltd	25	Odisha	Balongir	Mursing & Sikuan	Deogaon	Bolangir
Eminent Solar Power Pvt Ltd.	12.5	Uttarakhand	Udham Singh Nagar	Ratanpur Bazpur	Bajpur	Udham Singh Nagar
Total (MW)		381.5				

During the current monitoring period, the project was under continuous operation except for some scheduled maintenance and breakdowns. The major breakdown details have been mentioned in Appendix 2 of the Monitoring Report.

Also, there were no any such events during the current monitoring period which would have impacted the net GHG emission reduction or upon the monitoring parameter.

2.2 Deviations

2.2.1 Methodology Deviations

Not Applicable

2.2.2 Project Description Deviations

Not Applicable

2.3 Grouped Project

The project activity is grouped project activity. However, no new project activity instances have been added in this grouped project during the current monitoring period. Thus, original 11 project activity instances are part of current monitoring period.

2.4 Safeguards

2.4.1 No Net Harm

The project activity does not involve any major construction activity. It primarily requires the installation of the solar panel, 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 project activity operations do not result in direct air pollution, noise pollution. Please refer below web link for the same

<http://mnre.gov.in/file-manager/UserFiles/report-on-developmental-impacts-of-RE.pdf> .

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.

2.4.2 Local Stakeholder Consultation

As per VCS Guidelines, this section is not mandatory as the project is already registered and DOE Contract for validation was prior to 19/04/2017. There were no other major comments or protest raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.

As a part of continuous feedback from stakeholders, the PP also placed a grievance register onsite where-in, the stakeholders can put down their complain and the same if found genuine are addressed immediately.

3 DATA AND PARAMETERS

3.1 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, Version 11, April 2016
Value applied	0.9941
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 05.0.0" as 3-year generation weighted average using data for the years 2012-2013, 2013-2014 & 2014-2015. The data are obtained from "CO ₂ Baseline Database for Indian Power Sector" version 11.0, published by the Central Electricity Authority, Ministry of Power, Government of India
Purpose of the data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire first 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, Version 11, April 2016
Value applied	0.9285
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 05.0.0" as 3-year generation weighted average using data for the years 2012-2013, 2013-2014 & 2014-2015. The data are obtained from "CO ₂ Baseline Database for Indian Power Sector" version 11.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of the data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire first 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, Version 11, April 2016
Value applied	0.9777
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 05.0.0”. The data is obtained from “CO ₂ Baseline Database for Indian Power Sector” Version 11, April 2016, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of the data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire first crediting period.

3.2 Data and Parameters Monitored

Data / Parameter	EG _{facility,y}
Data unit	MWh
Description	Quantity of net electricity supplied (MWh) to the grid as a result of the implementation of the project activity instances in year y
Source of data	Credit Report /JMR as per Monthly Generation Report
Description of measurement methods and procedures to be applied	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic Calibration frequency: One in five years Electricity exported/imported to the grid is in kWh. However for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the project activity is calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from joint meter reading certificates/credit notes issued by state electricity board as per below equation: $EG_{facility,y} = EG_{Export} - EG_{Import}$ The joint reading at metering point is carried out once in a month in presence of O&M officials and state electricity board personnel. The calculations/measurement of net electricity supplied to grid is under purview of state electricity board and the PP/Project activity Instance owner has no role on it. PP/Project activity Instance owner gets value of net electricity supplied to grid and hence this parameter is mentioned as a part of monitoring plan. Cross Checking:

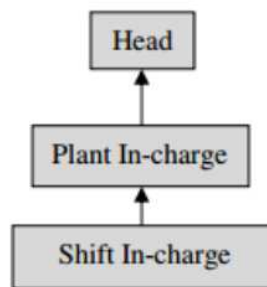
	Quantity of net electricity supplied to the grid can be cross checked from the invoices raised by the PP to the State Electricity Board or invoices with third party.
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	640,702 MWh
Monitoring equipment	Monitoring equipment are energy meters installed at each of the project activity instance site. Readings can be cross checked with back up meter. The accuracy class of meters, calibration frequency of meters is totally under purview of state electricity board and PP does not have any control on it.
QA/QC procedures to be applied	The calibration of all the meters are undertaken once in five years ⁵ and faulty meters are duly replaced immediately. The meters are of accuracy class 0.5s or higher. The meter accuracy class and calibration interval is under purview of state electricity board and PP/Project Activity Instances owner do not have any control on it. It is also noted that apportioning procedure (if applicable for project activity instances) is under control of state electricity board and PP do not have any control on it. The available parameter to PP/project activity instance owner is the net electricity supplied to grid and same parameter is mentioned as monitoring parameter.
Purpose of the data	The Data/Parameter is required to calculate the baseline emission.
Calculation method	The parameter is measured and if any calculation is required, the calculation is based on measured parameters.
Comments	Data is archived electronically for a period of 2 years beyond the end of crediting period

3.3 Monitoring Plan

The monitoring plan, which is implemented by the PP 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 registration, monitoring, measurement, reporting and reviewing of the data results with the PP. PP proposed the following structure for data monitoring, collection, data archiving and calibration of equipments for this project activity instances. The team comprises of the following members:

⁵ http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf

Organisational Structure for Monitoring

PP has assigned the responsibility of operation and maintenance of project activity instances with relevant and authorized O&M contractors. The Plant In-charge and Shift In-Charge have been deployed by O&M contractors.

Responsibilities of Head: Overall functioning and maintenance of the data.

Responsibilities of Plant In-charge: Responsibility for Maintains the data records, ensures completeness of data, and reliability of data (calibration of equipments).

Responsibilities of Shift In-charge: Responsibility for day to day data collection and maintains day to day log book for monitored data.

In the event when the individual verification period dates and billing cycle dates of the project activity do not coincide, then the electricity export will be apportioned based on number of days. The ratio of number of days under monitoring period and total number of days under billing cycle will multiplied to total electricity export to billing cycle. No such event is applicable for current monitoring period.

For project activity instances which involves solar projects with common metering, apportioning is followed to determine net electricity export to grid. The apportioning procedure is not under control of PP, thus value of net electricity supplied to grid is available to PP and same is mentioned as monitoring parameter. The value of net electricity supplied to grid is used for ER calculations.

It is to be noted that the metering arrangement, accuracy class of meters, feeder arrangements, calibration frequency of meters are under control of state electricity board and PP does not have any control on it. Thus any deviation at actual site or during verification is accepted.

QA & QC Procedures to be followed

Necessary check meters as required have been installed, to operate in standby mode or when the main meters are not working. All meters are calibrated at least once in five year as per CEA notification. Records of calibration certificates are maintained for verification. Hence, high quality is ensured with the above parameters. The calibration of meters is under purview of state electricity board and CME/ project activity instances owner do not have any control on it.

Data Recording and Storage

For measuring the net energy supplied to grid by the project activity instances at the interconnection point, one set of Main meter and Check Meter is provided. Representatives of both project activity instances Owner and State Utility are present to record the monthly meter readings. The state utility prepares the credit report for the net energy supplied to the grid and same is used as a basic document for monitoring and verification of the net energy supplied to the grid. Based on the monthly credit report, the project activity instances Owner raise an invoice to the utility. Utility pays to the project activity instances Owner based on this document.

The above documents are kept at safe storage for verification of emission reductions generated from the project activity. The period of data storage will be 2 years beyond crediting period.

Emergency preparedness

The project activity does not result in any unidentified activity that can result in substantial emissions from the project activity. However, in case monitoring equipment get failed or is found faulty, they are replaced with calibrated meters as quickly as possible. In case main meter get failed or is found faulty, the reading of check meter will be considered.

Personnel training

In order to ensure a proper functioning of the project activity instances and a properly monitoring of emission reductions, the staff are trained. The Shift In-charge and Plant In-charge are trained in equipment operation, data recording, operation and maintenance and emergency procedures in compliance with the monitoring plant.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

The baseline emission calculation for the project activity instances is attributable to the CO₂ Emission that could have been produced by the fossil fuel based power plants in absence of the proposed project activity. Therefore the amount electricity supplied to the Indian grid will be multiplied by the grid emission factor of Indian grid to calculate the baseline emissions reduced by the proposed project activity.

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

Where,

BE_y	=	Baseline Emissions in year y; tCO ₂
$EG_{\text{facility},y}$	=	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{\text{grid,CM},y}$	=	CO ₂ emission factor of the grid in year y; tCO ₂ /MWh

Thus

$$\begin{aligned}
 BE_y &= 640,702 * 0.9777 \\
 &= 626,414 \text{ tCO}_2\text{e (round down values)}
 \end{aligned}$$

4.2 Project Emissions

As per methodology, for renewable energy projects, there is no any project emissions occurred. Hence, $PE_y = 0$

4.3 Leakage

As per methodology, for renewable energy projects, there is no any leakage emissions occurred. Hence, $LE_y = 0$

4.4 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)
01/10/2018 to 31/12/2018	165,529	0	0	165,529
01/01/2019 to 31/08/2019	460,886	0	0	460,886
Total	626,414	0	0	626,414

The current monitoring period is from 01/10/2018 to 31/08/2019 and involves 335 days. For 365 days, annual estimation of ER is 705,971 tCO₂ and for 335 days, the same will be 647,946 tCO₂.

The actual emission reductions are 626,414 tCO₂ which is 3.32% lower than estimated. This is due to low PLF factor during current monitoring period. The PLF is not under control of PP.

APPENDIX 1: METER CALIBRATION DETAILS

The meter serial number (0.2 s Accuracy class) and their calibration details, for all project activity instances are provided below.

PP Name	MW	State	Project Location	Main Meter serial number	Check Meter Serial Number	Stand By Meter if available	Calibration Date	Due Date of next Calibration
Mihit Solar Power Private Ltd.	25	Punjab	Kherakhurd	PBB48607	NA	NA	06-12-2016	05-12-2021
Mihit Solar Power Private Ltd.	25	Punjab	Mankhera	PBB48603	NA	NA	06-12-2016	05-12-2021
Mihit Solar Power Private Ltd.	24	Punjab	Jandekalan	PBB48610	PBB48609	PBB48611	10-12-2015	09-12-2020
ACME Jaisalmer Solar Power Pvt. Ltd.	20	Andhra Pradesh	Raichotti	APX00910 & APX00913	APX00911 & APX00914	APX00912 & APX00915	26-04-2016	25-04-2021
Aarohi Solar Pvt. Ltd.	50	Andhra Pradesh	Hindupur	APX00584	APX00585	APX00586	29-12-2015	28-12-2020
Dayanidhi Solar Power Pvt. Ltd.	40	Andhra Pradesh	Shantipuram	APX00604	APX00605	APX00600	28-03-2016	27-03-2021
Niranjana Solar Energy Pvt. Ltd.	20	Andhra Pradesh	Patthikonda	15196518 & 15196512	15196519 & 15196521	15196516 & 15197462	19-03-2016	18-03-2021
Vishwatma Solar Energy Pvt Ltd.	30	Andhra Pradesh	Yemmiganur	15197463	15197470	15196511	19-03-2016	18-03-2021
Acme Raipur Solar Power Pvt. Ltd.	30	Chattishgarh	Bagbera	MSP54469	NA	NA	07-12-2015	06-12-2020
Dayakara Solar Power Pvt Ltd	30	Telangana	Maddur	APX00907	APX00908	APX00909	31-05-2016	30-05-2021
Grahati Solar Energy Pvt Ltd	50	Telangana	Balanagar	APX00971	APX00972	APX00973	09-06-2016	08-06-2021
Acme Odisha Solar Power Pvt Ltd	25	Odisha	Balongir	OPTO1170	OPTO1399	NA	24-06-2016	23-06-2021
Eminent Solar Power Pvt Ltd.	12.5	Uttarakhand	Uddham Singh Nagar	UKD02407	UKD02412	NA	09-02-2017	08-02-2022

The calibration frequency of the energy meters are once in five year. Hence, these calibrations are still valid during the current monitoring period from 01/10/2018 to 31/08/2019. As a result, error factor is not applicable to the generation data.

For Punjab state projects (74 MW), the project activity meters are connected to 66 kV supply line (CT/PT connected to 66 kV/110 V) and for rest sites, the solar plants are connected at 132 kV/33 kV substation.

APPENDIX 2: BREAKDOWN DETAILS

Major Breakdown details for the project activity is provided below.

Gen. Date	Customer Name	State	Site	MW	Breakdown Remark	Breakdown Hrs.
01-10-18	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	16.90
01-11-18	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	16.90
01-12-18	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	16.90
01-01-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	12.70
01-02-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Shut Down Taken By EB	12.70
01-03-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Shut Down Taken By EB	12.70
01-04-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Shut Down Taken By EB	12.80
01-05-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	12.80
01-06-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Grid Down from EB	12.80
01-07-19	Acme Odisha Solar Power Pvt Ltd	Odisha	Balongir	25	Line Breakdown due to Earth fault	24.00
01-10-18	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Grid Down from EB	16.90
01-11-18	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Grid Down from EB	16.90
01-12-18	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Line Breakdown due to Earth fault	24.00
01-01-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Grid Down from EB	12.70
01-02-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Line Breakdown due to Earth fault	12.70
01-03-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Shut Down Taken By EB	12.70
01-04-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Line Breakdown due to Earth fault	24.00
01-05-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Grid Down from EB	12.80
01-06-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Grid Down from EB	12.80
01-07-19	Acme Raipur Solar Power Pvt. Ltd.	Chattishgarh	Bagbera	30	Line Breakdown due to Earth fault	24.00
01-10-18	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Grid Down from EB	16.90
05-10-18	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Line Breakdown due to Earth fault	24.00
08-10-18	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	16.90
11-11-18	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Grid Down from EB	16.90

16-11-18	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Shut Down Taken By EB	12.70
20-11-18	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
01-12-18	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Line Breakdown due to Earth fault	24.00
01-12-18	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Shut Down Taken By EB	12.70
01-12-18	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
02-01-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Grid Down from EB	12.70
09-01-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Shut Down Taken By EB	12.70
14-01-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
10-02-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Line Breakdown due to Earth fault	12.70
13-02-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Grid Down from EB	12.80
15-02-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
01-03-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Shut Down Taken By EB	12.70
01-03-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Grid Down from EB	12.80
01-03-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
30-04-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Line Breakdown due to Earth fault	24.00
30-04-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Shut Down Taken By EB	12.70
30-04-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
01-05-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Grid Down from EB	12.80
01-05-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Line Breakdown due to Earth fault	24.00
01-05-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Shut Down Taken By EB	12.70
06-06-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Grid Down from EB	12.80
08-06-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Line Breakdown due to Earth fault	24.00
10-06-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
15-07-19	Mihit Solar Power Private Ltd.	Punjab	Kherakhurd	25	Line Breakdown due to Earth fault	24.00
18-07-19	Mihit Solar Power Private Ltd.	Punjab	Mankhera	25	Shut Down Taken By EB	12.70
21-07-19	Mihit Solar Power Private Ltd.	Punjab	Jandekalan	24	Grid Down from EB	12.80
14-10-18	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90

15-10-18	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Shut Down Taken By EB	12.70
16-10-18	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
17-10-18	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Line Breakdown due to Earth fault	24.00
18-10-18	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Grid Down from EB	16.90
05-11-18	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Line Breakdown due to Earth fault	24.00
06-11-18	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Grid Down from EB	16.90
07-11-18	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Shut Down Taken By EB	12.70
08-11-18	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Grid Down from EB	16.90
09-11-18	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Line Breakdown due to Earth fault	24.00
10-12-18	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Shut Down Taken By EB	12.70
11-12-18	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Grid Down from EB	16.90
12-12-18	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
13-12-18	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Line Breakdown due to Earth fault	24.00
14-12-18	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Grid Down from EB	16.90
08-01-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Shut Down Taken By EB	12.70
09-01-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Grid Down from EB	16.90
10-01-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Line Breakdown due to Earth fault	24.00
11-01-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Grid Down from EB	16.90
12-01-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Shut Down Taken By EB	12.70
13-02-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90
14-02-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Line Breakdown due to Earth fault	24.00
15-02-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
16-02-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Grid Down from EB	16.90
17-02-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Shut Down Taken By EB	12.70
01-03-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90
01-03-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Line Breakdown due to Earth fault	24.00
01-03-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90

01-03-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Shut Down Taken By EB	12.70
01-03-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Grid Down from EB	16.90
19-04-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90
20-04-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Shut Down Taken By EB	12.70
21-04-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
22-04-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Line Breakdown due to Earth fault	24.00
23-04-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Shut Down Taken By EB	12.70
25-05-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90
26-05-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Shut Down Taken By EB	12.70
27-05-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Line Breakdown due to Earth fault	24.00
28-05-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Grid Down from EB	16.90
29-05-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Line Breakdown due to Earth fault	24.00
01-06-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Grid Down from EB	16.90
02-06-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Line Breakdown due to Earth fault	24.00
03-06-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
04-06-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Line Breakdown due to Earth fault	24.00
05-06-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Grid Down from EB	16.90
07-07-19	ACME Jaisalmer Solar Power Pvt. Ltd.	Andhra Pradesh	Raichotti	20	Shut Down Taken By EB	12.70
08-07-19	AaroHi Solar Pvt. Ltd.	Andhra Pradesh	Hindupur	50	Grid Down from EB	16.90
09-07-19	Dayanidhi Solar Power Pvt. Ltd.	Andhra Pradesh	Shantipuram	40	Grid Down from EB	16.90
10-07-19	Niranjana Solar Energy Pvt. Ltd.	Andhra Pradesh	Patthikonda	20	Line Breakdown due to Earth fault	24.00
11-07-19	Vishwatma Solar Energy Pvt Ltd.	Andhra Pradesh	Yemmiganur	30	Grid Down from EB	16.90
05-10-18	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Grid Down from EB	16.90
05-10-18	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Shut Down Taken By EB	12.70
02-11-18	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Grid Down from EB	16.90
02-11-18	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Line Breakdown due to Earth fault	24.00
21-12-18	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Shut Down Taken By EB	12.70

21-12-18	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Grid Down from EB	16.90
13-01-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Grid Down from EB	16.90
13-01-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Line Breakdown due to Earth fault	24.00
15-02-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Shut Down Taken By EB	12.70
15-02-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Grid Down from EB	16.90
12-03-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Grid Down from EB	16.90
12-03-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Shut Down Taken By EB	12.70
28-04-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Line Breakdown due to Earth fault	24.00
28-04-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Grid Down from EB	16.90
30-05-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Grid Down from EB	16.90
30-05-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Shut Down Taken By EB	12.70
10-06-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Line Breakdown due to Earth fault	24.00
10-06-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Shut Down Taken By EB	12.70
14-07-19	Dayakara Solar Power Pvt Ltd	Telangana	Maddur	30	Shut Down Taken By EB	12.70
14-07-19	Grahati Solar Energy Pvt Ltd	Telangana	Balanagar	50	Line Breakdown due to Earth fault	24.00
01-10-18	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Shut Down Taken By EB	12.70
01-11-18	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Grid Down from EB	16.90
01-12-18	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Line Breakdown due to Earth fault	24.00
01-01-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Grid Down from EB	16.90
01-02-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Line Breakdown due to Earth fault	24.00
01-03-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Shut Down Taken By EB	12.70
01-04-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Grid Down from EB	16.90
01-05-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Grid Down from EB	16.90
01-06-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Shut Down Taken By EB	12.70
01-07-19	Eminent Solar Power Pvt Ltd.	Uttarakhand	Uddham Singh Nagar	12.5	Line Breakdown due to Earth fault	24.00