Monitoring report form for CDM project activity

(Version 07.0)

MONITORING REPORT		
Title of the project activity	70 MW Bhadla Solar power plant by Fortum Finnsurya Energy Pvt Ltd (EKIESL-CDM-APRIL-16-01)	
UNFCCC reference number of the project activity	10403[1]	
Version number of the PDD applicable to this monitoring report	03	
Version number of this monitoring report	02	
Completion date of this monitoring report	29/06/2019	
Monitoring period number	01	
Duration of this monitoring period	06/11/2017 to 01/04/2019 (inclusive of both days)	
Monitoring report number for this monitoring report	NA	
Project participants	Fortum FinnSurya Energy Private Limited	
Host Party	India	
Sectoral scopes	01 - Energy industries (renewable / non-renewable sources)	
Applied methodologies and standardized baselines	ACM0002: Grid-connected electricity generation from renewable sources Version 17.0 Standard Baseline: NA	
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013
	NA	201,309 tCO_2e
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	167,465 tCO_2e	

[1] https://cdm.unfccc.int/Projects/DB/Applus1506003422.59/view

SECTION A. Description of project activity

A.1. General description of project activity

The main purpose of this project activity is to generate clean form of electricity through renewable solar energy source. Fortum Finnsurya Energy Private Limited is the promoter of the project activity. The project activity has an installed capacity of 70 MW (AC) (88.2 MWp) solar power project at Bhadla, Jodhpur, Rajasthan. The annual average of electricity generation and emission reduction over 7 years of crediting period is 122,108 MWh/year and 119,384 tCO_2e per year.

The project activity is replacing anthropogenic emissions of greenhouse gases (GHG's) by displacing equivalent amount of electricity from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel based power plant.

The details of the project and the state of installation are mentioned in the table:

Project Participants Name	Capacity in MW (AC)	Connection with Grid	State
Fortum FinnSurya Energy Private Limited	70 MW	Indian Grid	Rajasthan

Sectoral Scope: 01 : Grid-connected electricity generation from renewable sources ACM0002-Version 17.0
Project Type: (i) : Renewable energy projects

Tools referred with above methodology are:

Tool to calculate the emission factor for an electricity system[2] - Version 05.0 (EB 87, Annex 09)

Scenario existing prior to the implementation of project activity:

The scenario existing prior to the implementation of the project activity, 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 paragraph 24 of Section 5.2.1 of applied methodology is the following:

If the project activity is the installation of a Greenfield power plant, the baseline scenario is 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, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".

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

[2] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf

The estimation of GHG emission reductions by the present project activity is limited to carbon dioxide (CO_2) only and its primary source is the fossil fuels consumed in the Indian Grid. The project undergoes continued operation during current monitoring period.

During the current monitoring period, the net GHG emission reductions by the project activity are 201,309 tCO_2e.

The investors of the project are as follows:

S. No.	Project Investor	Capacity (MW)	Date of Commissioning
1.	Fortum Finnsurya Energy Private Limited	70	31/03/2017

A.2. Location of project activity

The project activity is located in Village Bhadla, Tehsil Bap and district Jodhpur in the state of Rajasthan, India.

Project Investor	Latitude	Longitude	Date of Commissioning
Fortum Finnsurya Energy Private Limited	N 27° 28' 7.00"	E 71° 58' 17.00"	31/03/2017

Item	Description
District Headquarter	Jodhpur
Nearest Airport	Jodhpur, (227 km, 4 hrs drive)
Nearest railway station	Phalodi (83 km)
Road	National Highway
Nearest Port	Kandla (~800 km)
Water resource	Indira Gandhi Nahar Canal (2 km)

The location of the project activity as visible in the Google maps is shown below:

A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
India	Fortum Finnsurya Energy Private Limited	No

A.4. Reference to applied methodologies and standardized baselines

Title **:** Grid-connected electricity generation from renewable sources[3]
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 17.0[4]
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 05.0 (EB 87, Annex 09)[5]
- Tool for the demonstration and assessment of additionality- Version 07.0.0 (EB 70, Annex 08)[6]

A.5. Crediting period type and duration

Type of crediting period	Renewable
Crediting period from	06/112017 - 05/11/2024 (Renewable)

[3] http://cdm.unfccc.int/methodologies/PAmethodologies/approved

[4] http://cdm.unfccc.int/methodologies/DB/8W400U6E7LFHHYH2C4JR1RJWWO4PVN

[5] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf

[6] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

Length of the Crediting Period	7 Years
Monitoring period from	06/11/2017 to 01/04/2019 (both days included)

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

The project activity has an installed capacity of 70 MW (AC) which will qualify for a large CDM project activity under Type-I of the large scale methodologies. The technical specification of the equipments are tabulated below:

Technical detail of the equipment	Remark
Technology	Solar PV Module
Solar photovoltaic module	First solar series 4^{TM} PV Module
No of Modules	112.5Wp:- 88800, 115Wp:-587000, 117.5Wp:- 85200
Make	First Solar
Capacity	112.5Wp, 115Wp,117.5Wp
No of inverters	70
Make	ABB
Capacity	1000KVA
No. of transformers	18 (ITD) + 2 (PT)
Technical & Operational Lifetime	25 years

The project is already commissioned on 31/03/2017 date and supplying generated electricity to INDIAN grid.

B.2. Post-registration changes

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies or standardized baselines

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

B.2.2. Corrections

The geo-coordinates of the project site mentioned at the PDD dated 04/08/2017 found incorrect and actual project site is at different location but near to incorrect location provided. The new location found consistent during verification and exact location has been updated in the section A.2. The nature of this is permanent.

B.2.3. Changes to the start date of the crediting period

There is no change in the start date of the crediting period.

B.2.4. Inclusion of monitoring plan

There has not been any post registration change in the monitoring plan during the current monitoring period.

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

There is no any permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools during this monitoring period.

B.2.6. Changes to project design

There has not been any change in the project design during the current monitoring period

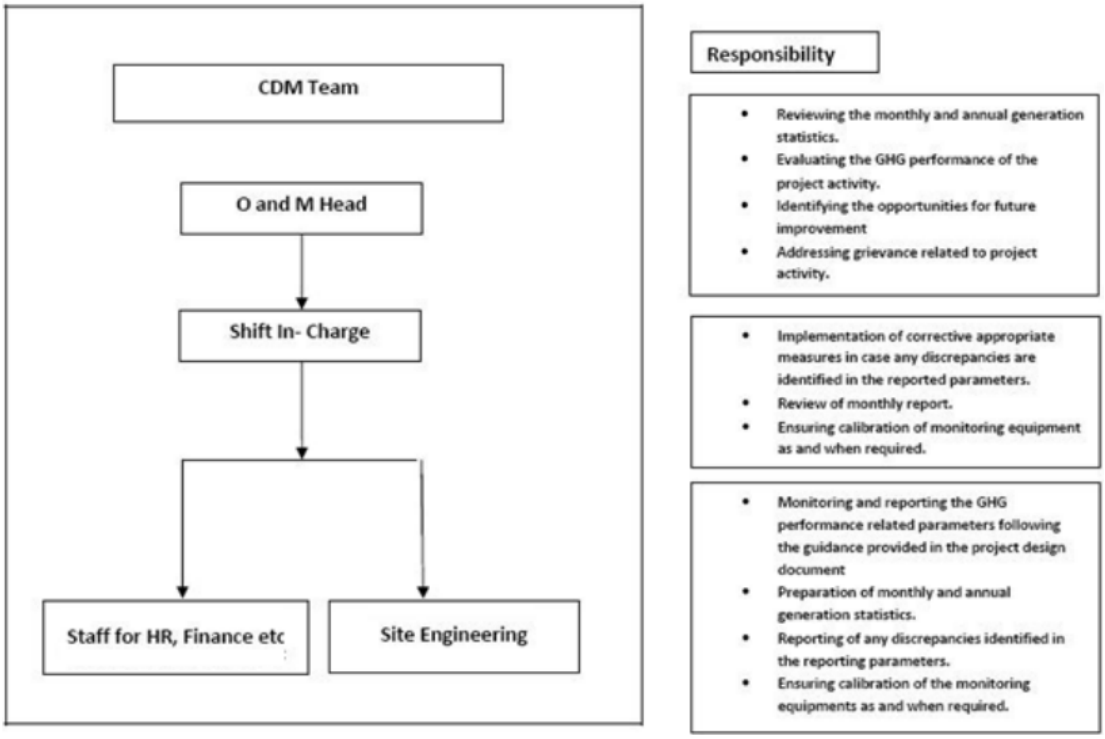
B.2.7. Changes specific to afforestation or reforestation project activity

Not Applicable

SECTION C. Description of monitoring system

The monitoring plan is developed and followed in accordance with the modalities and procedures for CDM project activities and is for grid-connected solar power project activity in Rajasthan, India. The monitoring plan which has been 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 follows the below mentioned 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 substation. Readings of meters are 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 Fortum Finnsurya Energy Private Limited, invoices are raised. These invoices are used for cross checking the meter readings taken for the respective project activity.

In case of billing cycle and monitoring period cycle does not match, then daily generation data is used to determine net electricity export for particular period.

Data collection and archiving

Readings from meters is collected in the presence of the plant in-charge. Export and Import data is 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 CERs for the project activity whichever occurs later.

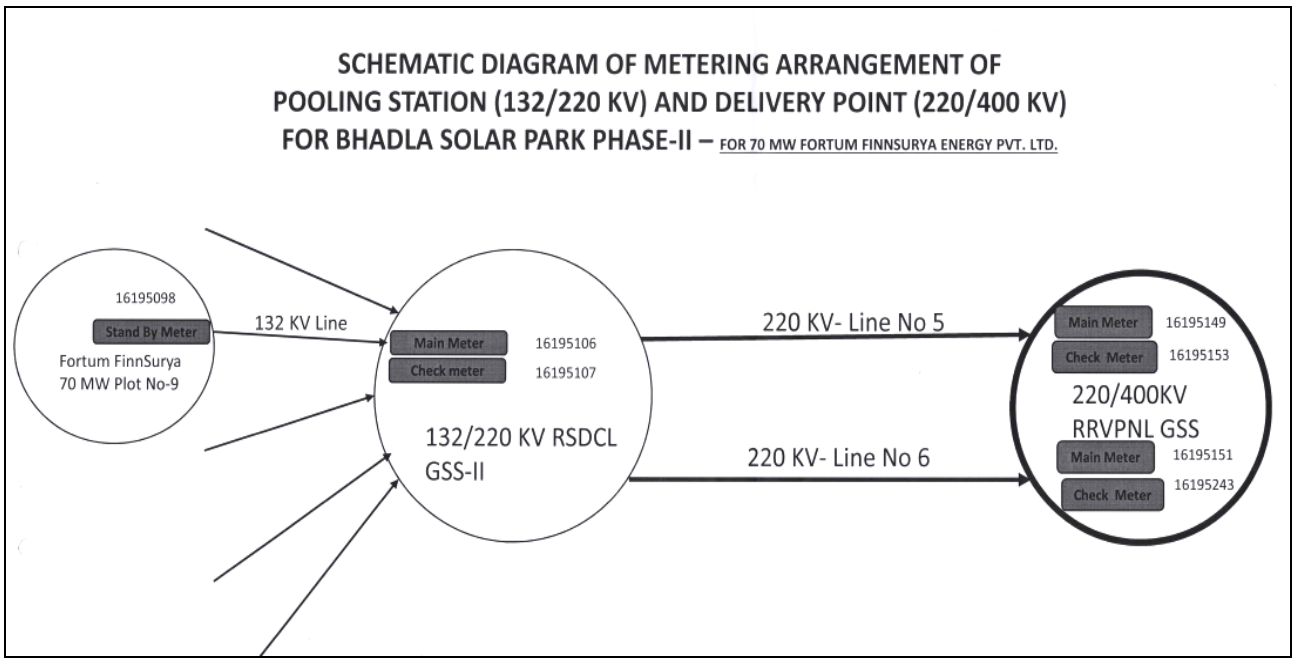
Emergency preparedness

The project activity will 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 staff (CDM team) has been trained. The plant helpers have been trained in equipment operation, data recording, reports writing, operation and maintenance and emergency procedures in compliance with the monitoring plan.

The Schematic Diagram of Metering arrangement of pooling station (132/220 KV) and delivery point (220/400 KV) for Bhadla Solar Phase II for 70 MW Fortum Finnsurya Energy Private Limited.



SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

Data/Parameter	$EF_{grid,OM,y}$
Unit	tCO_2/MWh
Description	Operating Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, Version 11, April 2016[7]
Value(s) applied	0.9941
Choice of data or measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 05" as 3-year generation weighted average using data for the years 2012-13, 2013-14, & 2014-15. The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 11, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data/parameter	For the calculation of the Baseline Emission
Additional comments	This parameter is fixed ex-ante for the entire crediting period

Data/Parameter	$EF_{grid,BM}$
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[8]
Value(s) applied	0.9285
Choice of data or measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 05" as 3-year generation weighted average using data for the years 2012-13, 2013-14, & 2014-15. The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 11, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data/parameter	For the calculation of the Baseline Emission
Additional comments	This parameter is fixed ex-ante for the entire crediting period

Data/Parameter	$EF_{grid,CM,y}$
Unit	tCO_2/MWh
Description	Combined Margin CO_2 emission factor in year y
Source of data	Calculated from CEA database, Version 11, April 2016[9]
Value(s) applied	0.9777
Choice of data or measurement methods and procedures	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ Where: $EF_{grid,BM,y}$= Build margin CO_2 emission factor in year *y* (tCO_2/MWh) $EF_{grid,OM,y}$= Operating margin CO_2 emission factor in year *y* (tCO_2/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM}= Weighting of build margin emissions factor (%) = 25%
Purpose of data/parameter	For the calculation of the Baseline Emission
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

[7] http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.pdf

[8] http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.pdf

[9] http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver11.pdf

D.2. Data and parameters monitored

Data/Parameter	$EG_{PJ,y}$
Unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Measured/calculated/ default	Measured
Source of data	Monthly joint meter reading reports (70MW)
Value(s) of monitored parameter	205901.33
Monitoring equipment	Please refer Appendix I for Energy meter details
Measuring/reading/recording frequency	Continuous measurement & monthly recording. **Plant end dedicated metering:** The electricity exported / supplied by the plant is first metered by plant end dedicated meter. This can be considered as stand by meter. **Common metering at the substation:** All the plants (including the project activity solar plant and other investors solar plant) are further connected to a common metering point at Pooling substation 132/220 KV GSS II and further electricity is transferred to 220/400 KV RRVPNL substation. The common metering point consists of both main & check meters (ABT Meters) having accuracy class of 0.2s. The export/import losses between these two substations are apportioned based on pooling substation readings.
Calculation method (if applicable)	The difference of final apportioned value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value has been considered for ER calculations.
QA/QC procedures	The meters is approved, tested & sealed by the State Utility. The meters are in the custody of State Utility. The frequency of calibration is once in 5 years[10]. The monthly electricity supplied/exported by the project activity in the JMR report is crosschecked with the monthly invoices of sale. In the absence or delay in the meter calibration, appropriate Guidelines will be applied appropriately to confirm the conservativeness of metering. The metering arrangement, accuracy class of meters, calibration frequency and apportioning approach is under control of state electricity board and PP do not have any control on it. PP is getting value of net electricity supplied to grid and the same is considered the monitoring parameter. The Calibration details of the Energy meters have been provided in Attachment-1 of this report.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Data is archived in paper & electronic form for two years after the end of crediting period or of the last issuance of CERs for this project activity, whichever occurs later.

D.3. Implementation of sampling plan

No sampling is required.

[10] 25 http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

The baseline emissions are the product of electrical energy baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

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

Where,

$EG_{PJ,y}$ = Total quantity of net electricity delivered to the INDIAN grid

$EF_{grid,CM,y}$ = Baseline emission factor
= 0.9777 tCO_2/MWh

BE_y = 205901.33 * 0.9777
= 201,309 tCO_2/year

E.2. Calculation of project emissions or actual net removals

As the project activity is solar powered renewable energy project, project emissions are zero.

$ER_y = BE_y - PE_y$
= 201,309 - 0
= 201,309 tCO_2e

E.3. Calculation of leakage emissions

No leakage has been considered for the project activity.

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or baseline net GHG removals (t CO_2e)	Project GHG emissions or actual net GHG removals (t CO_2e)	Leakage GHG emissions (t CO_2e)	GHG emission reductions or net anthropogenic GHG removals (t CO_2e)		
				Before 01/01/2013	From 01/01/2013	Total amount
Total	201,309	0	0	0	201,309	201,309

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period (t CO_2e)	Amount estimated ex ante (t CO_2e)
201,309	167,465

E.5.1. Explanation of calculation of "amount estimated ex ante for this monitoring period in the PDD"

The formula used to calculate the "amount estimated ex-ante for this monitoring period" is described below.

No. of days during the current monitoring period = 512 days

Annual estimation as per PDD= 119,384 tCO_2e

Hence, estimated Emission Reduction for 512 days of current monitoring period will be
= 119,384 * (512/365)
= 167,465 tCO_2e

E.6. Remarks on increase in achieved emission reductions

Actual Emission reduction is 20.21% higher than the estimated value, due to more number of sunshine hours during the current monitoring period. The PLF observed during the current monitoring period is 23.94%, the same has been checked with the additionality benchmark and it does not cross the benchmark value.

E.7. Remarks on scale of small-scale project activity

Not applicable, as this is a large-scale project activity.

Attachment 1: Meter Calibration Details

Calibration details for 132/220 KV RSDCL GSS II:

Meter Details (Main Meter)	
Sr. No.	16195106
Make	L&T
Accuracy Class	0.2s
Initial Meter Calibration Date	12/01/2017
Calibration Date	13/03/2018
Due date of Calibration Date	13/03/2023

Meter Details (Check Meter)	
Sr. No.	16195107
Make	L&T
Accuracy Class	0.2s
Initial Meter Calibration Date	12/01/2017
Calibration Date	13/03/2018
Due date of Calibration Date	13/03/2023

Calibration details for 220/400 KV RRVPNL GSS:

Meter Details (Bay 5)		
Sr. No.	16195149 (Main Meter)	16195153 (Check Meter)
Make	L&T	L&T
Accuracy Class	0.2s	0.2s
Calibration Date	23/10/2017	23/10/2017
Due date of Calibration Date	22/10/2022	22/10/2022

Meter Details (Bay 6)		
Sr. No.	16195151 (Main Meter)	16195243 (Check Meter)
Make	L&T	L&T
Accuracy Class	0.2s	0.2s
Calibration Date	23/10/2017	23/10/2017
Due date of Calibration Date	22/10/2022	22/10/2022

Please refer SECTION C for meter arrangements.

Attachment 2: Major Shutdown Details

Date	Inverter	Stop	Start	Duration	Reason
15-Mar-17	INV#8-A		13:30	13:30	Inverter ON after increasing DC Load
30-Apr-17	CMCS	6:00	19:00	13:00	Feeder no.-2,6,7 stop due to Load Shading from GSS
14-May-17	Block-3	6:00	19:00	13:00	Trafo-3a off due to inverter to trafo 400Sq mm Cable Changing
15-May-17	INV#3-A,B,C,D,E,F,G,H,	6:00	19:00	13:00	Inverter Off due to trafo 3 a/b Off Due to trafo LV cable problem
16-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a & b off due to inverter to trafo 400Sq mm Cable changing
16-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
16-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a & b off due to inverter to trafo 400Sq mm Cable changing
16-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
18-May-17	INV#3-A,B,C,D,E,F,G,H,	6:00	19:00	13:00	Inverter Off due to trafo 3 a/b Off Due to trafo LV cable problem
18-May-17	INV#9-C & D	6:00	19:00	13:00	Inverter Off due to trafo 9 b Off Due to Trafo LV cable problem
18-May-17	Inv#4-G	6:00	19:00	13:00	Inverter down due to Trafo to Inverter Cable Problem
18-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a & b off due to inverter to trafo 400Sq mm Cable changing
18-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
18-May-17	Inv#4-G	6:00	19:00	13:00	Inverter down due to Trafo to Inverter Cable Problem
19-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a & b off due to inverter to trafo 400Sq mm Cable changing
19-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
20-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a off due to inverter to trafo 400Sq mm Cable changing
20-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
20-May-17	Inv#4-G	6:00	19:00	13:00	Inverter down due to Trafo to Inverter Cable Problem
20-May-17	Inv#8-A	6:45	19:00	12:15	After check A inverter SMB DC cable Then Start Inverter
21-May-17	Block-3	6:00	19:00	13:00	Trafo-3 a off due to inverter to trafo 400Sq mm Cable changing
21-May-17	Block-9	6:00	19:00	13:00	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
21-May-17	Inv#4-G	6:00	19:00	13:00	Inverter down due to Trafo to Inverter Cable Problem
21-May-17	Inv#7-F	6:45	19:00	12:15	Inverter down due to ISU fault
23-May-17	Block-9	6:00	18:45	12:45	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
23-May-17	Block-2	6:00	19:00	13:00	Trafo-2 b off due to inverter to trafo 400Sq mm Cable changing
24-May-17	Block-9	6:00	18:45	12:45	Trafo-9 b off due to inverter to trafo 400Sq mm Cable changing
31-May-17	Block-01	6:00	19:00	13:00	Due to Inverter to trafo 400 sqmm cable change work
31-May-17	Inv#1-G,H	6:30	19:00	12:30	Inverter was Off due to trafo to inverter cable change

31-May-17	Inv#2-C	6:00	19:30	13:30	Inverter was down due to High Temp.(Fan Problem)
03-Jun-17	Block-01	6:00	19:00	13:00	Due to Inverter to trafo 400 sqmm cable change work
03-Jun-17	Inv#4-C	6:30	19:00	12:30	Inverter off due to gnd fault
04-Jun-17	Inv#4-C	6:00	19:00	13:00	Inverter off due to gnd fault
07-Jun-17	Inv#9-A	6:00	19:00	13:00	Inverter was shut down due to cable change work
13-Jun-17	Inv#9-E	6:00	19:00	13:00	During start of inverter spark observed from burnt cables
14-Jun-17	Inv#9-E	6:00	19:00	13:00	As all burnt cables are removed from inverter to trafo, so kept this inverter isolated
15-Jun-17	Inv#4-B	6:00	19:00	13:00	Inverter kept isolated as cables of inverter are fully burnt
16-Jun-17	Inv#4-A	6:00	19:00	13:00	As all burnt cables are removed from inverter to trafo, so kept this inverter isolated
18-Jun-17	INV#4-F	6:00	19:00	13:00	As all burnt cables are removed from inverter to trafo, so kept this inverter isolated
22-Jun-17	Inv#2-A	6:00	19:00	13:00	As all burnt cables are removed from inverter to trafo, so kept this inverter isolated
03-Jun-17	Inv#7-C	6:00	19:00	13:00	As all burnt cables are removed from inverter to trafo, so kept this inverter isolated
03-Jun-17	Block-07	6:00	19:20	13:20	Due to AC cables change work
06-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
06-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
06-Jul-17	Inv#4-B	6:00	19:20	13:20	Inverter down due to Charging fault
06-Jul-17	Inv#5-B	6:00	19:20	13:20	Inverter was down due to ground fault
07-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
07-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
08-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
08-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
08-Jul-17	INV#7-B	6:00	19:20	13:20	Inverter kept shut down as both side AC cables are removed to change
09-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
09-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
09-Jul-17	INV#7-B	6:00	19:20	13:20	Inverter kept shut down as DC power cables are removed to change in SMB 7 B 8
10-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
10-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
10-Jul-17	INV#7-B	6:00	19:20	13:20	Inverter kept shut down as DC power cables are removed to change in SMB 7 B 8
10-Jul-17	Inv#5-B	6:00	19:20	13:20	Inverter was down due to DC ground fault
10-Jul-17	Inv#6-A	6:00	19:20	13:20	Inverter was down due to DC ground fault
11-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter down due to DC power cable burn
11-Jul-17	Inv#8-D	6:00	19:20	13:20	Inverter down due to DC power cable burn
11-Jul-17	INV#7-B	6:00	19:20	13:20	Inverter kept shut down as DC power cables are removed to change in SMB 7 B 8
12-Jul-17	Inv#8-C	6:00	18:30	12:30	Inverter down due to DC power cable burn
12-Jul-17	INV#7-B	6:00	19:20	13:20	Inverter kept shut down as DC power cables are removed to change in SMB 7 B 8
12-Jul-17	Inv#7-B	6:00	19:20	13:20	Inverter was down due to DC ground fault
12-Jul-17	Inv#8-C	6:00	19:20	13:20	Inverter was down due to DC ground fault
12-Jul-17	INV#7-B	6:00	19:30	13:30	Inverter found Off Condition due to faulty Dc power cable Change

12-Jul-17	Inv#2-H	6:00	19:20	13:20	Inverter was down due to ground fault
12-Jul-17	SMB-2H8,7G6,3H7	6:00	19:00	13:00	Ground Fault
12-Jul-17	Inv#7-C	6:00	19:15	13:15	inverter was down due to communication error
12-Jul-17	Inv#9-D	6:00	19:15	13:15	inverter was down due to communication error
12-Jul-17	Inv#7-C	6:00	19:15	13:15	inverter was down due to communication error
12-Jul-17	Inv#9-D	6:00	19:15	13:15	inverter was down due to communication error
10-Aug-17	Inv#7-C	6:00	19:15	13:15	inverter was down due to communication error
10-Aug-17	Inv#9-D	6:00	19:15	13:15	inverter was down due to communication error
10-Aug-17	Inv#7-D	6:00	19:15	13:15	Inverter All SMB kept off due to SMB side cable lug change work
13-Aug-17	Inv#9-D	6:00	19:20	13:20	inverter was down due to communication error
13-Aug-17	Inv#8-C	6:00	19:15	13:15	Inverter Still down due to DC Faulty cables excavation work
25-Aug-17	Inv#8-C	6:00	19:15	13:15	Inverter Still down due to DC Faulty cables excavation work

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Document information

Version	*Date*	*Description*
07.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM project standard for project activities" (CDM-EB93-A04-STAN); • Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period; • Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods; • Make editorial improvements.
06.0	7 June 2017	Revision to: • Ensure consistency with version 01.0 of the "CDM project standard for project activities" (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB 70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).

Version	*Date*	*Description*
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.

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