



**Monitoring report form for CDM programme of activities
(Version 05.0)**

MONITORING REPORT			
Title of the PoA	Promotion of renewable energy generation in India- Programme of Activities		
UNFCCC reference number of the PoA	9416		
Version number of the PoA-DD applicable to this monitoring report	03		
Version number of this monitoring report	1.0		
Completion date of this monitoring report	29/10/2021		
Monitoring period number	First monitoring period		
Duration of this monitoring period	01/03/2013 - 31/12/2020 (both days included)		
Monitoring report number for this monitoring period	1		
Coordinating/managing entity	General Carbon Advisory Services Pvt. Ltd.		
Host Parties	Host Party of the PoA	Is this the host Party of a CPA covered in this monitoring report? (yes/no)	
	India	No	
Applied methodologies and standardized baselines	ACM0002, Grid-connected electricity generation from renewable sources, Version 13.0.0 Standardized baseline: Not applicable		
Sectoral scopes	01 - Energy industries (renewable/non-renewable sources)		
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by all CPAs covered in this monitoring report in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 December 2020	Amount achieved from 1 January 2021
	0	3,391,951	0
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the CPA-DDs for the CPAs covered in this monitoring report	3,743,095		

PART I Monitoring of programme of activities (PoA)

SECTION A. Description of PoA

A.1. General description of PoA

>>

The purpose of PoA is to generate energy by renewable source through the implementation of solar and wind power project and supply generated electricity to the connected grid. The supplied renewable energy thereby displaces GHG emission intensive electricity of the grid and help reduce grid's GHG emission intensity.

All Component project activity (CPAs) included in the PoA are implemented within the geographical boundary of India covering all the states and union territories and are implemented considering all applicable national/sectoral policies and regulations within states and union territories of India.

At the time of going for current verification, 16 CPAs with a total installed capacity of 733.1 MW of which 110 MW is installed in solar power projects. These CPAs are implemented in the states of Maharashtra, Madhya Pradesh, Rajasthan, Andhra Pradesh and Karnataka in India.

In the current monitoring period, the CPAs activity generated 35,73,096.34 MWh of clean energy and feeds to the connected electricity grid and thereby reduces 3,391,951 tCO₂e of GHG emissions.

A.1.1. Corresponding generic component project activities (CPAs)

Title and reference number of the corresponding generic CPA	Version of the PoA-DD	Sectoral scopes	Applied methodologies and standardized baselines
CPA DD Generic_Solar_REG	03	01	<p>ACM0002, Grid-connected electricity generation from renewable sources, version 13.0.0¹</p> <p>This methodology also refers to the latest approved versions of the following tools²:</p> <ul style="list-style-type: none"> • Tool to calculate the emission factor for an electricity system" (Ver. 03.0.0) • Tool for the demonstration and assessment of additionality (Ver. 07.0.0) • Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (Ver. 02) <p>Standardized Baseline: Not applicable</p>

¹ <https://cdm.unfccc.int/UserManagement/FileStorage/DYPFI935XBG274NWH6O8CM1KEZR0VU>

² <https://cdm.unfccc.int/methodologies/PAMethodologies/approved>

A.1.2. CPAs included in the PoA

Title and UNFCCC reference number of the CPA	Version of the PoA-DD	Title and reference number of the corresponding generic CPA	Crediting period type and duration	Covered in this monitoring report? (yes/no)
Wind Power Project at Bakhrani, Rajasthan CPA 9416-P1-0001-CP1	03	CPA DD Generic_Solar_REG	Fixed 01/03/2013 - 28/02/2023	Yes
Jamb Wind Power Project, Maharashtra CPA 9416-P1-0002-CP1	03	CPA DD Generic_Solar_REG	Renewable 04/08/2014 - 03/08/2021	Yes
Vaspet-II and Vaspet III Wind Power Project, Maharashtra CPA 9416-P1-0003-CP1	03	CPA DD Generic_Solar_REG	Renewable 04/08/2014 – 03/08/2021	No
Wind power project at Chikodi, Karnataka CPA 9416-P1-0004-CP1	03	CPA DD Generic_Solar_REG	Renewable 30/09/2014 - 29/09/2021	Yes
Welturi I wind power project in Maharashtra CPA 9416-P1-0005-CP1	03	CPA DD Generic_Solar_REG	Renewable 03/10/2014 - 02/10/2021	Yes
Bhud Wind power project, Maharashtra CPA 9416-P1-0006-CP1	03	CPA DD Generic_Solar_REG	Renewable 29/12/2014 – 28/12/2021	Yes
Welturi II wind power project in Maharashtra CPA 9416-P1-0007-CP1	03	CPA DD Generic_Solar_REG	Renewable 08/01/2015 – 07/01/2022	Yes
Dangri Wind Power Project, Rajasthan CPA 9416-P1-0008-CP1	03	CPA DD Generic_Solar_REG	Renewable 23/03/2015 – 22/03/2022	Yes
Vaspet IV Wind Power Project, Maharashtra CPA 9416-P1-0009-CP1	03	CPA DD Generic_Solar_REG	Renewable 01/04/2015 – 31/03/2022	Yes
Pratapgarh Wind Power Project, Rajasthan CPA 9416-P1-0010-CP1	03	CPA DD Generic_Solar_REG	Renewable 23/07/2015 – 22/06/2022	Yes
Sheopur Solar Power Project, Madhya Pradesh CPA 9416-P1-0011-CP1	03	CPA DD Generic_Solar_REG	Renewable 14/09/2015 – 13/09/2022	Yes
Bhesada Wind Power Project in Rajasthan CPA 9416-P1-0012-CP1	03	CPA DD Generic_Solar_REG	Renewable 31/03/2016 – 28/02/2023	No
Mandsaur Wind Power Project in Madhya Pradesh CPA 9416-P1-0013-CP1	03	CPA DD Generic_Solar_REG	Renewable 01/04/2016 – 31/03/2023	No
Rajgarh Wind Power Project in Rajasthan CPA 9416-P1-0014-CP1	03	CPA DD Generic_Solar_REG	Renewable 02/05/2016 – 01/05/2023	No
Lingasugur Wind Power Project in Karnataka CPA 9416-P1-0015-CP1	03	CPA DD Generic_Solar_REG	Renewable 05/08/2016 – 04/08/2023	No
ReNew Solar Power Project in AP CPA 9416-P1-0016-CP1	03	CPA DD Generic_Solar_REG	Renewable 28/09/2016 – 27/09/2023	No

A.2. Coordinating/managing entity

>>

General Carbon Advisory Services Pvt. Ltd.

SECTION B. Implementation of PoA**B.1. Description of implemented PoA**

>>

The CPAs included in PoA implemented renewable energy projects i.e. wind and solar power projects. The projects under CPAs part of the current monitoring period are already implemented and are in operation since. Details of implementation are available in section C. No sampling approach was applied for the CPAs covered in the current monitoring report.

CME ensures that no CPA claims emission reductions under any other programme or as a CDM project activity. Operational data records for the project activities under each CPA part of current monitoring period are maintained at the CPA and PoA levels. Operational data for each CPA is collected and recorded at the site level and then combined at the PoA level.

B.2. Post-registration changes to PoA**B.2.1. Corrections**

>>

No corrections have been made or are being submitted applicable to current monitoring period to programme information or parameters fixed at the registration or renewal of PoA.

B.2.2. Inclusion of monitoring plan

>>

Not applicable in the current monitoring period.

B.2.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

>>

No permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents are applied to the current monitoring period.

B.2.4. Changes to programme design

>>

No changes to programme design of the PoA are applicable during the current monitoring period.

B.2.5. Changes specific to afforestation or reforestation activities

>>

This is not an afforestation or reforestation programme. Hence this does not apply to the registered PoA.

PART II Monitoring of CPAs

>>

SECTION C. Implementation of CPAs

C.1. Description of implemented CPAs

>>

The CPAs are greenfield renewable energy power plants that operate wind and solar energy project and are connected to the grid. The renewable electricity thus generated avoids generation of equivalent electricity in the carbon intensive grid and reduces CO₂ emissions.

Information of the installed technologies, equipment and implementation status of the CPAs is tabulated below.

Title and UNFCCC reference number of the CPA	Installed Technology	Equipment	Installed capacity (MW)	Start date of commercial operation
Wind Power Project at Bakhrani, Rajasthan CPA 9416-P1-0001-CP1	WTGs	Enercon, E-53; Rated power : 800 kW	14.4 ³	30/08/2012
Jamb Wind Power Project, Maharashtra CPA 9416-P1-0002-CP1	WTGs	Kenersys, K82/2.0MW; Rated power : 2000 kW	28.0	18/02/2012
Wind power project at Chikodi, Karnataka CPA 9416-P1-0004-CP1	WTGs	Gamesha; Rated power : 2000kW	18.0	13/03/2013
Welturi I wind power project in Maharashtra CPA 9416-P1-0005-CP1	WTGs	Suzlon, S-97 (17 Nos) and S-95 (7 Nos); Rated power : 2100 kW	50.4	26/11/2015
Bhud Wind power project, Maharashtra CPA 9416-P1-0006-CP1	WTGs	ReGen Powertech, V87 Rated power : 1500 kW	49.5	27/12/2012
Welturi II wind power project in Maharashtra CPA 9416-P1-0007-CP1	WTGs	Suzlon, S-97 (11 No.s) and S-95 (1 No.s); Rated power: 2100 kW	25.2	11/02/2013
Dangri Wind Power Project, Rajasthan CPA 9416-P1-0008-CP1	WTGs	Inox Wind, DF/2000/93/2 model; Rated power: 2000 kW	30.0	11/06/2014
Vaspert IV Wind Power Project, Maharashtra CPA 9416-P1-0009-CP1	WTGs	ReGen Powertech, V87; Rated power: 1500 kW	49.5	06/08/2013
Pratapgarh Wind Power Project, Rajasthan CPA 9416-P1-0010-CP1	WTGs	Regen Powertech, V87; Rated power: 1500 kW	51.0	18/09/2014
Sheopur Solar Power Project, Madhya Pradesh CPA 9416-P1-0011-CP1	Solar PV	Thin film PV Modules of First Solar Series 4 PV modules Rated power: 90 Wp, 92.5 Wp, 95 Wp, 97.5 Wp, 100 Wp	50.0	05/05/2014

³ 14.4 MW out of 25.6 MW of registered CPA has been installed so far.

C.2. Location of CPAs

>>

Title and UNFCCC reference number of the CPA	Host party	Village/ Taluk	District	State
Wind Power Project at Bakhrani, Rajasthan CPA 9416-P1-0001-CP1	India	Rama and Bakharani	Jaisalmer	Rajasthan
Jamb Wind Power Project, Maharashtra CPA 9416-P1-0002-CP1	India	Jamb and Rameshwar	Satara	Maharashtra
Wind power project at Chikodi, Karnataka CPA 9416-P1-0004-CP1	India	Karoshi in Chikodi Taluk	Belgaum	Karnataka
Welturi I wind power project in Maharashtra CPA 9416-P1-0005-CP1	India	Deulgaon Ghat, Aranvihira, Chinchewadi, Shedala, Gahukhel and Karkhel	Beed	Maharashtra
Bhud Wind power project, Maharashtra CPA 9416-P1-0006-CP1	India	Balwadi, Benapur, Menganwadi and Bhud	Sangli	Maharashtra
Welturi II wind power project in Maharashtra CPA 9416-P1-0007-CP1	India	Welturi and Shedala	Beed	Maharashtra
Dangri Wind Power Project, Rajasthan CPA 9416-P1-0008-CP1	India	Chodiya and Dangri	Jaisalmer	Rajasthan
Vaspet IV Wind Power Project, Maharashtra CPA 9416-P1-0009-CP1	India	Nigadi Khurd, Karajangi and Gholeshwar	Sangli	Maharashtra
Pratapgarh Wind Power Project, Rajasthan CPA 9416-P1-0010-CP1	India	Maliya, Sona Kothi, Khodi Amba, Bhanej, Ratanpuriya, Ghoti, Ghatiwali Khedi, Choti Ambeli, Barado Ka Kheda, Doli Rampuriya, Dindor ka Kheda	Pratapgarh	Rajasthan
Sheopur Solar Power Project, Madhya Pradesh CPA 9416-P1-0011-CP1	India	Hulpur and Ladpura	Sheopur	Madhya Pradesh

C.3. Post-registration changes to CPAs**C.3.1. Temporary deviations from the monitoring plans in the included CPA-DDs, applied methodologies, standardized baselines or other methodological regulatory documents**

>>

There are no temporary deviations from the monitoring plans in the included CPA-DDs or the applied methodologies during the current monitoring period.

C.3.2. Corrections

>>

There are no corrections to project information or parameters fixed at the inclusion or renewal of crediting period of any of the CPAs covered in the current monitoring period.

C.3.3. Changes to the start date of the crediting period

>>

There are no changes to the start date of the crediting period fixed at the inclusion of any of the CPAs covered in this monitoring report

C.3.4. Inclusion of monitoring plan

>>

Not applicable in the current monitoring period.

C.3.5. Permanent changes to the included monitoring plans, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

>>

There are no permanent changes to the monitoring plans in the included CPA-DDs, or permanent deviation of monitoring from the applied methodologies, applied standardized baseline, or other methodological regulatory documents, for any of the CPAs covered in this monitoring report

C.3.6. Changes to project design

>>

No change in the project design is applicable.

C.3.7. Changes specific to afforestation or reforestation CPA

>>

This is not an afforestation or reforestation programme. Hence this does not apply to the registered CPAs.

SECTION D. Description of monitoring system of CPAs

>>

CPAs require monitoring of net electricity supplied by the project in a year. CME has established a well defined monitoring system to monitor and record data from each CPA as also laid out in each CPA-DD.

For below CPAs a uniform monitoring system is applied and hence this is described here together for each of these.

- 1.CPA 9416-P1-0001-CP1
- 2.CPA 9416-P1-0002-CP1
- 3.CPA 9416-P1-0005-CP1
- 4.CPA 9416-P1-0006-CP1
- 5.CPA 9416-P1-0007-CP1
- 6.CPA 9416-P1-0008-CP1
- 7.CPA 9416-P1-0009-CP1
- 8.CPA 9416-P1-0010-CP1
- 9.CPA 9416-P1-0011-CP1

As laid out in the registered CPAs, the monitoring team includes PP's employees and O&M contractor's representatives. Net electricity supplied by the project activity to the grid which is measured. Measurement results are cross-checked with records of sold electricity. One metering system is there at the substation and another at the WTGs. If the variation between the two meter readings is significant for the monthly recording of data, the meters are reset and calibrated. The

measurement is taken from the DISCOM's energy meter which is located in the substation. Meter reading is carried out in every calendar month. Then the same is reported to the district electricity purchaser office.

The accuracy of monitoring parameter is ensured by adhering to the calibration and testing procedure as set in the power purchase agreement. The projects adhere to all mandatory regulatory and statutory requirements at the state as well as national level. The energy meters installed are tri-vector meters of 0.2% accuracy class.

In cases, where a particular feeder/ substation has other projects not part of the CPA, connected through same electricity meter, apportioning method is applied. Even otherwise, to get WTG/ project owner wise electricity supplied to grid, apportioning is required and is carried out as below.

APPORTIONING PROCEDURE

Apportioning of net electricity uploading is done with reference to the electricity generated from individual projects. The DISCOM issues a monthly Joint Energy Meter Readings sheet for actual power exported from the wind farm to the grid. Apportioning of net electricity supplied, as per the Joint Energy Meter Readings sheet, by each project owner is done based on the individual meter readings of each wind turbine. The apportioning is done by electricity purchaser (representative of DISCOM) in cases jointly with the PP. The Joint Meter Reading with electricity buyer is used to calculate actual net electricity supplied to the grid and on the basis of that GHG emission reductions by the proposed project activity is calculated.

The net electricity exported to the grid by project activity is referred from monthly Joint meter readings recorded by the state electricity board representative and the O&M team. The main billing meter at substation records total export, and total import by all the connected projects to the substation through a feeder. The electricity export and import by the project of the PP is then calculated by using the following formulae as given below. This is the billable reading against which the PP raises invoice to the state electricity board.

Formula:

Net Generation of a project @ for credit: $\text{kWh individual @ Controller X Total (Import kWh - Export kWh) @ EB}$

Total Controller Generation of projects connected on a feeder

Procedures for handling data uncertainty:

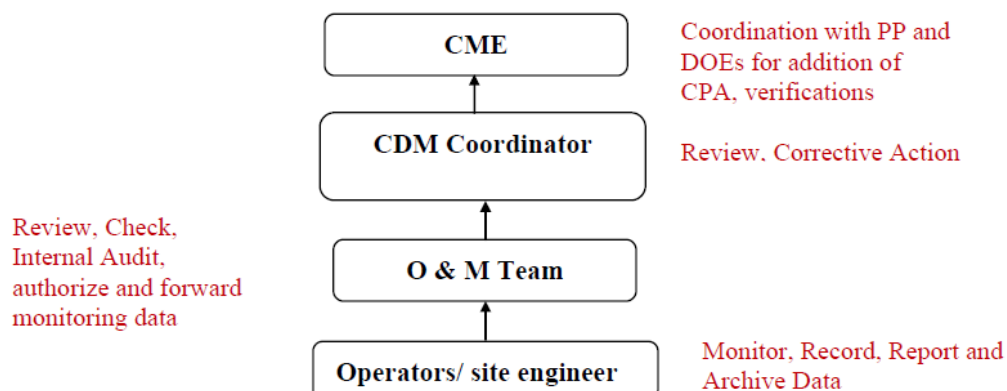
- a. In case main meter is faulty: In the event that the main metering system is not in the service as result of maintenance, repairs or testing, then the back metering system shall be used during the period the main metering system is not in service and the provisions above shall apply to the reading of the backup metering system.
- b. In case both the meters are faulty: When the Main Metering System and/or Backup Metering System and/or any component thereof is found to be outside the acceptable limit of accuracy or otherwise not functioning properly, it shall be repaired, recalibrated or replaced as soon as possible by the power producer Power Producers/Developers or by the DISCOM. DISCOM will ensure that metering system is tested for accuracy at least once in year and report furnished along with joint meter reading.

Any meter seal(s) shall be broken only by the authorised officer of DISCOM in the presence of representative of Power Producers/ Developers, whenever the Main Metering System or the backup metering system is to be inspected, tested, adjusted, repaired or replaced.

In case, the monitoring period starts mid month, the reading for that month is apportioned based on the daily electricity export data give by the O&M contractor. This is also checked with the average daily export arrived from that month's JMR and the conservative of the two is used for the emission reduction calculation.

It may be noted that the above method is applied by the state agencies responsible for this and project proponent has no control over it.

The operational and management structure implemented by PP and O&M contractor is as follows:



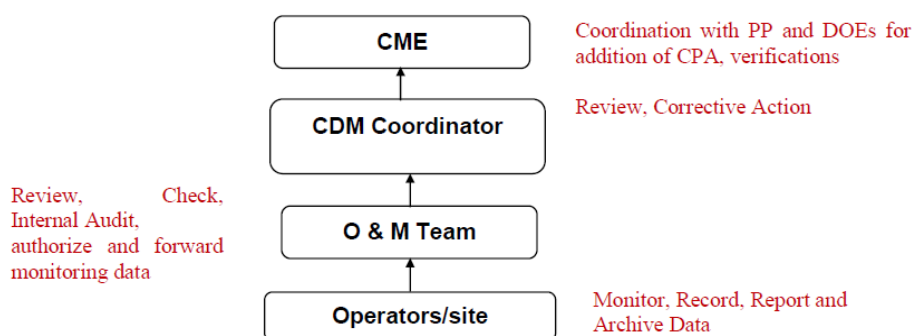
CPA 9416-P1-0004-CP1

In this CPA, four WTGs are connected in one feeder and 5 WTGs with other feeder to record energy export and import, both are connected in Karnataka Power Transmission Corporation Limited (KPTCL) substation through which transmission losses are calculated between substation and feeder meters (procedure in form B) and based on that net energy export is calculated.

The JMR is usually taken once in month for the feeder meters and also at the common substation where non project WTG's are also connected. With the help of both the readings transmission losses are calculated between the substation and feeder meters. Net electricity export to grid is then calculated as:

Export - (export*Transmission loss %) -115% Import.

The operational and management structure implemented by PP and O&M contractor is as follows:



In cases, if a particular feeder/ substation has other WTGs not part of this CPA connected through same electricity meter, apportioning is used. Even otherwise, to get WTG/ project owner wise electricity supplied to grid, apportioning is required and is carried out as below.

Appropriating Procedure

Apportioning of net electricity uploading is done with reference to the electricity generated from individual WTGs. The Karnataka Power Transmission Corporation Limited (KPCL/ KPTCL16) will issue a monthly Joint Energy Meter Readings sheet for actual power exported from the wind farm to the grid. Apportioning of net electricity supplied, as per the Joint Energy Meter Readings sheet, by each project owner is done based on the individual meter readings of each wind turbine. The apportioning will be done by electricity purchaser

(representative of DISCOM) in cases jointly with the PP. The Joint Meter Reading with electricity buyer will be used to calculate actual net electricity supplied to the grid and on the basis of that GHG emission reductions by the proposed project activity will be calculated.

It is clear that PP also has two separate meters connected respectively to four and five WTGs in this CPA. The present JMR and billing happens at these meters and same is used for the monitoring. In future, if some reason, JMR happens at above discussed sub-station (managed by KPTCL), the same is used for the monitoring.

Procedures for handling data uncertainty:

- a. In case main meter is faulty: In the event that the main metering system is not in the service as result of maintenance, repairs or testing, then the back metering system shall be used during the period the main metering system is not in service and the provisions above shall apply to the reading of the backup metering system.
- b. In case both the meters are faulty: When the Main Metering System and/or Backup Metering System and/or any component thereof is found to be outside the acceptable limit of accuracy or otherwise not functioning properly, it shall be repaired, recalibrated or replaced as soon as possible by the KPTCL. KPTCL will ensure that metering system is tested for accuracy at least once in year and report furnished along with joint meter reading.

Any meter seal(s) is broken open only by the authorised officer of KPTCL in the presence of representative of Power Producers/ Developers, whenever the Main Metering System or the backup metering system is to be inspected, tested, adjusted, repaired or replaced.

In case, the monitoring period starts mid-month, the reading for that month are apportioned based on the daily electricity export data give by the O&M contractor. This is also checked with the average daily export arrived from that month's JMR and the conservative of the two is used for the emission reduction calculation.

SECTION E. Data and parameters

E.1. Data and parameters fixed ex ante

For

- 1.CPA 9416-P1-0001-CP1
- 2.CPA 9416-P1-0002-CP1
- 3.CPA 9416-P1-0005-CP1
- 4.CPA 9416-P1-0006-CP1
- 5.CPA 9416-P1-0007-CP1
- 6.CPA 9416-P1-0008-CP1
- 7.CPA 9416-P1-0009-CP1
- 8.CPA 9416-P1-0010-CP1
- 9.CPA 9416-P1-0011-CP1

Data/Parameter	$EF_{grid\ BM, y}$
Unit	tCO ₂ /MWh
Description	The Build Margin emission factor of NEWNE grid
Source of data	CEA CO ₂ Baseline Database, version 07
Value(s) applied	For NEWNE grid = 0.8588

Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO ₂ Baseline database for the Indian power sector, Version 7.0). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period.

Data/Parameter	EF _{grid OM, y}
Unit	tCO ₂ /MWh
Description	The Operating Margin emission factor of NEWNE grid
Source of data	CEA CO ₂ Baseline Database, version 07
Value(s) applied	For NEWNE grid = 0.9842
Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO ₂ Baseline database for the Indian power sector, Version 7.0). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period.

Data/Parameter	EF _{grid CM, y}
Unit	tCO ₂ /MWh
Description	Combined margin CO ₂ 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" for NEWNE grid.
Source of data	Calculated as per the "Tool to calculate the emission factor for an electricity system"
Value(s) applied	For NEWNE grid = 0.9528
Choice of data or measurement methods and procedures	As per the "Tool to calculate the emission factor for an electricity system" Once at the time of validation of PoA.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period.

CPA 9416-P1-0004-CP1

Data/Parameter	EF _{grid BM, y}
Unit	tCO ₂ /MWh
Description	The Build Margin emission factor of Southern grid
Source of data	CEA CO ₂ Baseline Database, version 07
Value(s) applied	For Southern grid = 0.7339
Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO ₂ Baseline database for the Indian power sector, Version 7.0). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data/parameter	Calculation of baseline emissions

Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period.
---------------------	--

Data/Parameter	EF _{grid OM, y}
Unit	tCO ₂ /MWh
Description	The Operating Margin emission factor of Southern grid
Source of data	CEA CO ₂ Baseline Database, version 07
Value(s) applied	For Southern grid = 0.9514
Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO ₂ Baseline database for the Indian power sector, Version 7.0). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period.

Data/Parameter	EF _{grid CM, y}
Unit	tCO ₂ /MWh
Description	Combined margin CO ₂ 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" for Southern Grid
Source of data	Calculated as per the "Tool to calculate the emission factor for an electricity system"
Value(s) applied	For Southern grid = 0.8970
Choice of data or measurement methods and procedures	As per the "Tool to calculate the emission factor for an electricity system" Once at the time of validation of PoA.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Parameter was determined ex-ante and would not be monitored during the crediting period. .

E.2. Data and parameters monitored

CPA 9416-P1-0001-CP1

Data/Parameter	EG _{facility,y}
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated/default	Measured
Source of data	Joint meter reading OR break up sheet provided by power purchaser
Value(s) of monitored parameter	160,198.41

Monitoring equipment	<p>Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 1.</p> <table><tr><th>Feeder number</th><th>Main meter</th><th>Check meter</th></tr><tr><td>Line 1</td><td>11068579 (old) 15624843 (new)</td><td>15197055</td></tr><tr><td>Line 2</td><td>15197058</td><td>15197057</td></tr></table> <p>For all meters:</p> <ul style="list-style-type: none">• Meter make: L&T• Accuracy class: 0.2 s• Meter calibration frequency: Annual	Feeder number	Main meter	Check meter	Line 1	11068579 (old) 15624843 (new)	15197055	Line 2	15197058	15197057
Feeder number	Main meter	Check meter								
Line 1	11068579 (old) 15624843 (new)	15197055								
Line 2	15197058	15197057								
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording									
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters (both import and export) or CMS data, the JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).									
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable									
Purpose of data/parameter	Baseline emissions calculation									
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later									

CPA 9416-P1-0002-CP1

Data/Parameter	EG _{facility,y}		
Unit	MWh		
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y		
Measured/calculated/default	Measured		
Source of data	Joint meter reading or Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)		
Value(s) of monitored parameter	307,058.72		
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 2.		
	Meter Numbers	13132602	13132604
	Meter make	Elster	Elster
	Accuracy	0.2 s	0.2 s
	Meter calibration frequency: Annual		
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording		
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters (both import and export) or CMS data, the JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).		

QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data/parameter	Baseline emissions calculation
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

CPA 9416-P1-0004-CP1

Data/Parameter	EG _{facility,y}											
Unit	MWh											
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y											
Measured/calculated/default	Measured											
Source of data	Joint meter reading OR break up sheet provided by power purchaser											
Value(s) of monitored parameter	225,457.19											
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 3.											
	<table><tr><th>Feeder number</th><th>Main meter</th><th>Check meter</th></tr><tr><td>Renew 1</td><td>12092898 (old) 18068256 (new)</td><td>09142583 (old) 18068260 (new)</td></tr><tr><td>Renew 2</td><td>12093144 (old) 12093358 (new)</td><td>18068261 (old) 18068256 (new)</td></tr></table>			Feeder number	Main meter	Check meter	Renew 1	12092898 (old) 18068256 (new)	09142583 (old) 18068260 (new)	Renew 2	12093144 (old) 12093358 (new)	18068261 (old) 18068256 (new)
	Feeder number	Main meter	Check meter									
	Renew 1	12092898 (old) 18068256 (new)	09142583 (old) 18068260 (new)									
Renew 2	12093144 (old) 12093358 (new)	18068261 (old) 18068256 (new)										
Also for all meters: Meter make: L&T ER 300P Accuracy class: 0.2 s Meter calibration frequency: Annual												
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording											
Calculation method (if applicable)	<p>Here 4 WTGs are connected in one feeder and 5 WTGs with other feeder to record energy export and import, both are connected in Karnataka Power Transmission Corporation Limited (KPTCL) substation through which transmission losses are calculate between substation and feeder meters (procedure in form B) and based on that net energy export is calculated. The JMR is usually taken once in month for the feeder meters and also at the common substation where non project WTG's are also connected. With the help of both the readings transmission losses are calculated between the substation and feeder meters. Net electricity export to grid is then calculated as:</p> <p>Export - (export*Transmission loss %) -115% Import</p> <p>Measurement by: electricity meters (feeder meters, substation meters, WTG controller/ CMS) Recording: Electronic and paper Recording Frequency: Continuous monitoring and monthly recording Responsibility: The operators/ O&M team will be responsible for measurement Calibration Testing Frequency: Annually Accuracy class of meters: 0.2s/ 0.5s (as per state regulation)</p>											
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable											
Purpose of data/parameter	Baseline emissions calculation											

Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later
---------------------	---

CPA 9416-P1-0005-CP1

Data/Parameter	EG _{facility,y}														
Unit	MWh														
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y														
Measured/calculated/default	Measured														
Source of data	Joint meter reading OR Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)														
Value(s) of monitored parameter	598,191.89														
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 4.														
	<table><tr><th>Feeder number</th><th>Main meter</th><th>Check meter</th></tr><tr><td>Feeder 1</td><td>16351033</td><td>16351032</td></tr><tr><td>Feeder 2</td><td>16351034</td><td>16351035</td></tr><tr><td>Feeder 4</td><td>16636437</td><td>16636438</td></tr></table>			Feeder number	Main meter	Check meter	Feeder 1	16351033	16351032	Feeder 2	16351034	16351035	Feeder 4	16636437	16636438
	Feeder number	Main meter	Check meter												
	Feeder 1	16351033	16351032												
	Feeder 2	16351034	16351035												
Feeder 4	16636437	16636438													
For all meters:															
Meter make: Elster A1800															
Accuracy class: 0.2 s															
Meter calibration frequency: Annual															
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording														
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters (both import and export) or CMS data, the JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).														
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable														
Purpose of data/parameter	Baseline emissions calculation														
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later														

CPA 9416-P1-0006-CP1

Data/Parameter	EG _{facility,y}
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated/default	Measured
Source of data	Joint meter reading OR Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)
Value(s) of monitored parameter	384,496.82

Monitoring equipment	<p>Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 5.</p> <p>Meter numbers: HTO1131079 HTO1131078 HT01131080 HT01131081</p> <p>For all meters: Meter make: Wallaby Accuracy class: 0.2 s Meter calibration frequency: Annual</p>
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters (both import and export) or CMS data, the JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data/parameter	Baseline emissions calculation
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

CPA 9416-P1-0007-CP1

Data/Parameter	EG _{facility,y}											
Unit	MWh											
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y											
Measured/calculated/default	Measured											
Source of data	Joint meter reading OR Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)											
Value(s) of monitored parameter	245,264.39											
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 6.											
	<table><tr><td>Feeder number</td><td>Main meter</td><td>Check meter</td></tr><tr><td>Feeder 3</td><td>16636435</td><td>16636436</td></tr><tr><td>Feeder 4</td><td>16636437</td><td>16636438</td></tr></table>			Feeder number	Main meter	Check meter	Feeder 3	16636435	16636436	Feeder 4	16636437	16636438
	Feeder number	Main meter	Check meter									
	Feeder 3	16636435	16636436									
	Feeder 4	16636437	16636438									
For all meters:												
Meter make: Elster A1800												
Accuracy class: 0.2 s												
Meter calibration frequency: Annual												
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording											

Calculation method (if applicable)	Continuous monitoring is of electricity generation from the WTGs (project and non-project) is monitored in a common bulk/ revenue meter (main and check) at the substation. Joint meter reading is usually taken once in month for the bulk/ revenue meter at the common substation. Also individual WTG controller electricity meters monitor electricity generation (both import and export) continuously. Further at the CMS, generation is monitored. The JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR) or directly taken from the JMR.
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data/parameter	Baseline emissions calculation
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

CPA 9416-P1-0008-CP1

Data/Parameter	EG _{facility,y}
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated/default	Measured
Source of data	Monthly Joint meter reading OR Credit Note (breakup sheet) provided by Inox Wind
Value(s) of monitored parameter	242,694.15
Monitoring equipment	<p>Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 7.</p> <ul style="list-style-type: none"> •Main meter: RJB78210 Corresponding check meter: RJB78212 •Main meter: RJB78319 Corresponding check meter: RJB78319 •Main meter: RJB81560 Corresponding check meter: RJB81561 <p>For all meters: Meter make: Secure Meters Accuracy class: 0.2 s Meter calibration frequency: Annual</p>
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters or CMS data, the electricity export and electricity import from project WTG's is calculated and reported with JMR in the form of breakup sheet/credit notes. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data/parameter	Baseline emissions calculation
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

CPA 9416-P1-0009-CP1

Data/Parameter	EG _{facility,y}
Unit	MWh

Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y		
Measured/calculated/default	Measured		
Source of data	Joint meter reading OR Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)		
Value(s) of monitored parameter	507,577.37		
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 8.		
	Feeder number	Main meter	Check meter
	Feeder 1	HT01140153	HT01140154
	Feeder 2	HT01140151	HT01140152
	For all meters: Meter make: Wallaby Accuracy class: 0.2 s Meter calibration frequency: Annual		
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording		
Calculation method (if applicable)	Not applicable		
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable		
Purpose of data/parameter	Baseline emissions calculation		
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later		

CPA 9416-P1-0010-CP1

Data/Parameter	EG _{facility,y}	
Unit	MWh	
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y	
Measured/calculated/default	Measured	
Source of data	Monthly Joint meter reading OR Credit Note provided by Regen Powertech	
Value(s) of monitored parameter	420,325.74	
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 9.	
	Main meter	Check meter
	RJB79223	RJB79224
	For all meters: Meter make: Secure meters Accuracy class: 0.2 s Meter calibration frequency: Annual	
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording	

Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. The JMR gives electricity export from the WTG's and electricity import by the WTG's. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data/parameter	Baseline emissions calculation
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

CPA 9416-P1-0011-CP1

Data/Parameter	EG _{facility,y}				
Unit	MWh				
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y				
Measured/calculated/default	Measured				
Source of data	Monthly Joint meter reading OR SLDC report				
Value(s) of monitored parameter	481,831.66				
Monitoring equipment	Equipment: Main & Check Meters; Meter details provided in Table below. Details on calibration dates are provided in the Annexure 10.				
	Location	132 kV S/s Vijaypur	132 kV S/s Vijaypur	132 kV S/s Vijaypur	132 kV S/s Vijaypur
	Meter no	MPC68357	0014194902	MPC68356	0014194900
	Make	Apex100	L&T Ltd	Apex100	L&T Ltd
	Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s
	For all meters: Meter calibration frequency: Annual				
Measuring/reading/recording frequency	Continuous measurement and at least monthly recording				
Calculation method (if applicable)	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation, the JMR gives electricity export and import from solar farm. By using these data, net export in the CPA will be calculated (as in some case net export is not explicitly reported in JMR).				
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable				
Purpose of data/parameter	Baseline emissions calculation				
Additional comments	Data will be archived for more than two years after end of crediting period or last issuance, whichever later				

E.3. Implementation of sampling plan

>>

This is not applicable as no sampling approach is applied to the current monitoring period.

SECTION F. Calculation of emission reductions or net anthropogenic removals

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

>>

According to the registered CPAs, the baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y(1)}$$

Combined margin CO2 emission factor for grid connected power generation ($EF_{grid,CM,y}$) is calculated as follows:

Combined margin CO2 emission factor for grid applicable to CPAs is presented below.

CPA UNFCCC reference number	Calculation	Baseline emission factor for the grid for ex-ante emission reduction calculations
CPA 9416-P1-0001-CP1 CPA 9416-P1-0002-CP1 CPA 9416-P1-0005-CP1 CPA 9416-P1-0006-CP1 CPA 9416-P1-0007-CP1 CPA 9416-P1-0008-CP1 CPA 9416-P1-0009-CP1 CPA 9416-P1-0010-CP1 CPA 9416-P1-0011-CP1	$=0.75 * 0.9842 + 0.25 * 0.8588$	0.9528 tCO ₂ e/MWh
CPA 9416-P1-0004-CP1	$=0.75 * 0.9514 + 0.25 * 0.7339$	0.8970 tCO ₂ e/MWh

Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity ($EG_{PJ,y}$) is calculated as below.

CPA UNFCCC reference number	$EG_{PJ,y}$ (MWh)	$EG_{facility,y}$ (MWh)	$EG_{PJ,y} * EF_{grid,CM,y(1)}$	BE_y (tCO ₂ e)
CPA 9416-P1-0001-CP1	160,198.41	160,198.41	$160,198.41 * 0.9528$	152,637
CPA 9416-P1-0002-CP1	307,058.72	307,058.72	$307,058.72 * 0.9528$	292,565
CPA 9416-P1-0004-CP1	225,457.19	225,457.19	$225,457.19 * 0.8970$	202,235
CPA 9416-P1-0005-CP1	598,191.89	598,191.89	$598,191.89 * 0.9528$	569,957
CPA 9416-P1-0006-CP1	384,496.82	384,496.82	$384,496.82 * 0.9528$	366,348
CPA 9416-P1-0007-CP1	245,264.39	245,264.39	$245,264.39 * 0.9528$	233,687
CPA 9416-P1-0008-CP1	242,694.15	242,694.15	$242,694.15 * 0.9528$	231,328
CPA 9416-P1-0009-CP1	507,577.37	507,577.37	$507,577.37 * 0.9528$	483,619
CPA 9416-P1-0010-CP1	420,325.74	420,325.74	$420,325.74 * 0.9528$	400,486
CPA 9416-P1-0011-CP1	481,831.66	481,831.66	$481,831.66 * 0.9528$	459,089

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

>>

The CPAs do not envisage any fossil fuel consumption.

Therefore, the parameter $PE_{FF,y} = 0$ tCO₂e/ annum.

Also, as the proposed PoA Project activity is not a geothermal project activity or a hydro project activity, hence, the Project emissions as per parameters $PE_{GP,y}$ and $PE_{HP,y}$ are also zero.

Therefore, $PE_y = 0 \text{ tCO}_2\text{e/annum}$

F.3. Calculation of leakage emissions

>>

This is not applicable to the CPAs covered in this monitoring report as per ACM0002 Version 13.0.0.

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

CPA UNFCCC reference number	Baseline GHG emissions or baseline net GHG removals (t CO ₂ e)	Project GHG emissions or actual net GHG removals (t CO ₂ e)	Leakage GHG emissions (t CO ₂ e)	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)			
				Before 01/01/2013	From 01/01/2013 until 31/12/2020	From 01/01/2021	Total amount
CPA 9416-P1-0001-CP1	152,637	0	0	0	152,637	0	152,637
CPA 9416-P1-0002-CP1	292,565	0	0	0	292,565	0	292,565
CPA 9416-P1-0004-CP1	202,235	0	0	0	202,235	0	202,235
CPA 9416-P1-0005-CP1	569,957	0	0	0	569,957	0	5,69,957
CPA 9416-P1-0006-CP1	366,348	0	0	0	366,348	0	366,348
CPA 9416-P1-0007-CP1	233,687	0	0	0	233,687	0	233,687
CPA 9416-P1-0008-CP1	231,328	0	0	0	231,328	0	231,328
CPA 9416-P1-0009-CP1	483,619	0	0	0	483,619	0	483,619
CPA 9416-P1-0010-CP1	400,486	0	0	0	400,486	0	400,486
CPA 9416-P1-0011-CP1	459,089	0	0	0	459,089	0	459,089
Total	3,391,951	0	0	0	3,391,951	0	3,391,951

F.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the included CPA-DDs

CPA UNFCCC reference number	Amount achieved during this monitoring period (t CO ₂ e)	Amount estimated ex ante for this monitoring period in the CPA-DD (t CO ₂ e)
CPA 9416-P1-0001-CP1	152,637	214,950
CPA 9416-P1-0002-CP1	292,565	301,277
CPA 9416-P1-0004-CP1	202,235	208,185
CPA 9416-P1-0005-CP1	569,957	509,777
CPA 9416-P1-0006-CP1	366,348	540,896
CPA 9416-P1-0007-CP1	233,687	209,754
CPA 9416-P1-0008-CP1	231,328	281,190
CPA 9416-P1-0009-CP1	483,619	525,586
CPA 9416-P1-0010-CP1	400,486	505,675
CPA 9416-P1-0011-CP1	459,089	445,805
Total	3,391,951	3,743,095

F.5.1. Explanation of calculation of “amount estimated ex ante for this monitoring period in the CPA-DD”

>>

CPA UNFCCC reference number	Ex-ante emission for 365 days (t CO ₂ e)	Number of days in the current monitoring period (days)	Ex-ante estimate of emission reduction for the monitoring period (t CO ₂ e)
CPA 9416-P1-0001-CP1	27,406	2863	214,950
CPA 9416-P1-0002-CP1	46,974	2341	301,277
CPA 9416-P1-0004-CP1	33,255	2285	208,185
CPA 9416-P1-0005-CP1	81,609	2280	509,777
CPA 9416-P1-0006-CP1	90,067	2192	540,896
CPA 9416-P1-0007-CP1	42,066	1820	209,754
CPA 9416-P1-0008-CP1	48,827	2102	281,190
CPA 9416-P1-0009-CP1	91,265	2102	525,586
CPA 9416-P1-0010-CP1	92,796	1989	505,675
CPA 9416-P1-0011-CP1	84,049	1936	445,805

F.6. Remarks on increase in achieved emission reductions

>>

CPA UNFCCC reference number	Emissions compared to Ex-ante estimate of emission reduction for the monitoring period (More/ Less)	Difference of achieved emission reductions from ex-ante estimate of emission reduction (%)
CPA 9416-P1-0001-CP1	Less	29.0 %
CPA 9416-P1-0002-CP1	Less	2.9 %
CPA 9416-P1-0004-CP1	Less	2.9 %
CPA 9416-P1-0005-CP1	More	11.8 %
CPA 9416-P1-0006-CP1	Less	32.3 %
CPA 9416-P1-0007-CP1	More	11.4 %
CPA 9416-P1-0008-CP1	Less	17.8 %
CPA 9416-P1-0009-CP1	Less	7.9 %
CPA 9416-P1-0010-CP1	Less	20.2 %
CPA 9416-P1-0011-CP1	More	2.9 %

The achieved emission reductions from ex-ante estimate of emission reduction in the current monitoring period for most CPAs is lower.

F.7. Remarks on scale of small-scale CPAs

>>

CPA UNFCCC reference number	Project Capacity (MW)	Scale
CPA 9416-P1-0001-CP1	25.6	Large
CPA 9416-P1-0002-CP1	28.0	Large
CPA 9416-P1-0004-CP1	18.0	Large
CPA 9416-P1-0005-CP1	50.4	Large
CPA 9416-P1-0006-CP1	49.5	Large
CPA 9416-P1-0007-CP1	25.2	Large

CPA UNFCCC reference number	Project Capacity (MW)	Scale
CPA 9416-P1-0008-CP1	30.0	Large
CPA 9416-P1-0009-CP1	49.5	Large
CPA 9416-P1-0010-CP1	51.0	Large
CPA 9416-P1-0011-CP1	50.0	Large

All CPAs included in the current monitoring period are large scale project activities.

Annexure 1: Meter and Calibration details for CPA 9416-P1-0001-CP1

Location	Line 1				
	Main Meter	Backup Meter	Check Meter	Main Meter	Backup Meter
Meter No.	11068579	11068580	15197055	15624843	15624844
Meter make	L&T	L&T	L&T	L&T	L&T
Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s	0.2 s
Calibration I	26/12-/2012	26/12-/2012	NA		
Valid Till	25/12/2013	25/12/2013	NA		
Calibration II	26/12/2013	26/12/2013	NA		
Valid Till	25/12/2014	25/12/2014	NA		
Calibration III	14/02/2015	14/02/2015	NA		
Valid Till	13/02/2016	13/02/2016	NA		
Calibration IV	09/04/2016	09/04/2016	09/04/2016		
Valid Till	08/04/2017	08/04/2017	08/04/2017		
Calibration V	25/05/2017	25/05/2017	25/05/2017		
Valid Till	24/05/2018	24/05/2018	24/05/2018		
Calibration VI	14/05/2018	14/05/2018	14/05/2018		
Valid Till	13/05/2019	13/05/2019	13/05/2019		
Calibration VII			20/01/2020	20/01/2020	20/01/2020
Valid Till			19/01/2021	19/01/2021	19/01/2021
Current calibration			15/03/2021	15/03/2021	15/03/2021
Valid Till			14/03/2022	14/03/2022	14/03/2022

Location	Line 2		
	Main Meter	Backup Meter	Check Meter
Meter No.	15197058	15197059	15197057
Meter make	L&T	L&T	L&T
Accuracy class	0.2 s	0.2 s	0.2 s
Line 2 was commissioned in FY2016-17.			
Calibration II	25/05/2017	25/05/2017	25/05/2017
Valid Till	24/05/2018	24/05/2018	24/05/2018
Calibration III	10/05/2018	10/05/2018	10/05/2018
Valid Till	09/05/2019	09/05/2019	09/05/2019
Calibration IV	20/01/2020	20/01/2020	20/01/2020
Valid Till	19/01/2021	19/01/2021	19/01/2021
Current Calibration	15/03/2021	15/03/2021	15/03/2021
Valid Till	14/03/2022	14/03/2022	14/03/2022

Annexure 2: Meter and Calibration details for CPA 9416-P1-0002-CP1

Meter no	13132602	13132604
Meter make	Elster	Elster
Accuracy	0.2 s	0.2 s
Calibration I	10/06/2014	10/06/2014
Valid till	09/06/2015	09/06/2015
Calibration II	26/06/2015	26/06/2015
Valid till	25/06/2016	25/06/2016
Calibration III	15/02/2017	15/02/2017
Valid till	14/02/2018	14/02/2018
Calibration IV	19/12/2017	19/12/2017
Valid till	18/12/2018	18/12/2018
Calibration V	02/03/2019	02/03/2019
Valid till	01/03/2020	01/03/2020
Calibration VI	03/03/2020	03/03/2020
Valid till	02/03/2021	02/03/2021
Current Calibration	24/06/2021	24/06/2021
Valid till	23/06/2022	23/06/2022

Annexure 3: Meter and Calibration details for CPA 9416-P1-0004-CP1

	Renew 1			
Type	Main Meter	Check Meter	Main Meter	Check Meter
Meter no	12092898	09142583	18068256	18068260
Make	L&T ER 300P	L&T ER 300P	L&T ER 300P	L&T ER 300P
Accuracy	0.2 s	0.2 s	0.2 s	0.2 s
Calibration I	26/11/2013	26/11/2013		
Valid till	25/11/2014	25/11/2014		
Calibration II	13/03/2015	13/03/2015		
Valid till	12/03/2016	12/03/2016		
Calibration III	17/04/2017	17/04/2017		
Valid till	16/04/2018	16/04/2018		
Current Calibration	Replaced	Replaced	29/05/2020	29/05/2020
Valid till			28/03/2021	28/03/2021

	Renew 2			
Type	Main Meter	Check Meter	Main Meter	Check Meter
Meter no	12093144	12093358	18068261	18068256
Make	L&T ER 300P	L&T ER 300P	L&T ER 300P	L&T ER 300P
Accuracy	0.2 s	0.2 s	0.2 s	0.2 s
Calibration I	26/11/2013	26/11/2013		
Valid till	25/11/2014	25/11/2014		
Calibration II	13/03/2015	13/03/2015		
Valid till	12/03/2016	12/03/2016		
Calibration III	17/04/2017	17/04/2017		
Valid till	16/04/2018	16/04/2018		
Current Calibration	Replaced	Replaced	29/05/2020	29/05/2020
Valid till			28/03/2021	28/03/2021

Annexure 4: Meter and Calibration details for CPA 9416-P1-0005-CP1

	Feeder No. 1		Feeder No. 2		Feeder No. 4	
Meter no	16351033	16351032	16351034	16351035	16636437	16636438

	Main	Check	Main	Check	Main	Check
Accuracy	0.2 s	0.2 s	0.2 s	0.2 s	0.2 s	0.2 s
Make	Elster A1800	Elster A1800	Elster A1800	Elster A1800	Elster A1800	Elster A1800
Calibration I	20/12/2017	20/12/2017	20/12/2017	20/12/2017	20/12/2017	20/12/2017
Valid till	19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018
Current Calibration	10/07/2020	10/07/2020	10/07/2020	10/07/2020	10/07/2020	10/07/2020
Valid till	09/07/2021	09/07/2021	09/07/2021	09/07/2021	09/07/2021	09/07/2021

Annexure 5: Meter and Calibration details for CPA 9416-P1-0006-CP1

Meter no	HTO1131079	HTO1131078	HTO1131080	HTO1131081
Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s
Make	Wallaby	Wallaby	Wallaby	Wallaby
Calibration I	11/02/2014	11/02/2014	11/02/2014	11/02/2014
Valid till	10/02/2015	10/02/2015	10/02/2015	10/02/2015
Calibration II	19/03/2016	19/03/2016	19/03/2016	19/03/2016
Valid till	18/03/2017	18/03/2017	18/03/2017	18/03/2017
Calibration III	02/07/2018	02/07/2018	02/07/2018	02/07/2018
Valid till	01/07/2019	01/07/2019	01/07/2019	01/07/2019
Calibration IV	17/12/2019	17/12/2019	17/12/2019	17/12/2019
Valid till	16/12/2020	16/12/2020	16/12/2020	16/12/2020
Current Calibration	29/09/2021	29/09/2021	29/09/2021	29/09/2021
Valid till	28/09/2022	28/09/2022	28/09/2022	28/09/2022

Annexure 6: Meter and Calibration details for CPA 9416-P1-0007-CP1

	Feeder No. 3		Feeder No. 4	
Type	Main	Check	Main	Check
Meter no	16636435	16636436	16636437	16636438
Accuracy	0.2 s	0.2 s	0.2 s	0.2 s
Make	Elster A1800	Elster A1800	Elster A1800	Elster A1800
Calibration I	20/12/2017	20/12/2017	20/12/2017	20/12/2017
Valid till	19/12/2018	19/12/2018	19/12/2018	19/12/2018
Current Calibration	10/07/2020	10/07/2020	10/07/2020	10/07/2020
Valid till	09/07/2021	09/07/2021	09/07/2021	09/07/2021

Annexure 7: Meter and Calibration details for CPA 9416-P1-0008-CP1

Type	Main	Check	Main	Check	Main	Check
Meter no	RJB78210	RJB78212	RJB78319	RJB78320	RJB81560	RJB81561
Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s	0.2 s	0.2 s
Make	Secure	Secure	Secure	Secure	Secure	Secure
Calibration I	24/12/2015	24/12/2015	24/12/2015	24/12/2015	24/12/2015	24/12/2015
Valid till	25/12/2016	25/12/2016	25/12/2016	25/12/2016	25/12/2016	25/12/2016
Calibration II	27/12/2015	29/12/2015	30/12/2015	27/12/2015	29/12/2015	30/12/2015
Valid till	26/12/2016	28/12/2016	29/12/2016	26/12/2016	28/12/2016	29/12/2016
Calibration III	16/03/2017	16/03/2017	15/03/2017	15/03/2017	16/03/2017	16/03/2017
Valid till	15/03/2018	15/03/2018	14/03/2018	14/03/2018	15/03/2018	15/03/2018
Calibration IV	20/03/2018	20/03/2018	18/03/2018	18/03/2018	20/03/2018	20/03/2018
Valid till	19/03/2019	19/03/2019	17/03/2019	17/03/2019	19/03/2019	19/03/2019
Current Calibration	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020
Valid till	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021

Annexure 8: Meter and Calibration details for CPA 9416-P1-0008-CP1

Feeder number	Feeder No. 2		Feeder No. 1	
Meter number	HT01140153	HT01140154	HT01140151	HT01140152
Check main	Main	Check	Main	Check
Make	Wallaby	Wallaby	Wallaby	Wallaby
Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s
Calibration I	29/06/2015	29/06/2015	29/06/2015	29/06/2015
Valid till	28/06/2016	28/06/2016	28/06/2016	28/06/2016
Calibration II	07/09/2016	07/09/2016	07/09/2016	07/09/2016
Valid till	06/09/2017	06/09/2017	06/09/2017	06/09/2017
Calibration III	20/09/2017	20/09/2017	20/09/2017	20/09/2017
Valid till	19/09/2018	19/09/2018	19/09/2018	19/09/2018
Calibration IV	27/06/2018	27/06/2018	27/06/2018	27/06/2018
Valid till	26/06/2019	26/06/2019	26/06/2019	26/06/2019

Annexure 9: Meter and Calibration details for CPA 9416-P1-0010-CP1

Type	Main	Check
Meter no	RJB79223	RJB79224
Accuracy class	0.2 s	0.2 s
Meter make	Secure	Secure
Calibration I	08/06/2017	08/06/2017
Valid till	07/06/2018	07/06/2018
Calibration II	30/10/2017	30/10/2017
Valid till	29/10/2018	29/10/2018
Calibration III	31/07/2018	31/07/2018
Valid till	30/07/2019	30/07/2019
Calibration IV	09/11/2019	09/11/2019
Valid till	08/11/2020	08/11/2020
Current Calibration	10/02/2021	10/02/2021
Valid till	09/02/2022	09/02/2022

Annexure 10: Meter and Calibration details for CPA 9416-P1-0011-CP1

Location	132 kV S/s Vijaypur	132 kV S/s Vijaypur	132 kV S/s Vijaypur	132 kV S/s Vijaypur
Meter no	MPC68357	0014194902	MPC68356	0014194900
Make	Apex100	Larsen & Toubro Ltd	Apex100	Larsen & Toubro Ltd
Accuracy class	0.2 s	0.2 s	0.2 s	0.2 s
Calibration I	12/03/2015		12/03/2015	
Valid till	11/03/2016		11/03/2016	
Calibration II	05/07/2016	06/07/2016	06/07/2016	06/07/2016
Valid till	04/07/2017	05/07/2017	05/07/2017	05/07/2017
Calibration III	25/09/2017	26/09/2017	25/09/2017	25/09/2017
Valid till	24/09/2018	25/09/2018	24/09/2018	24/09/2018
Current Calibration	11/10/2020	12/10/2020	11/10/2020	12/10/2020
Valid till	10/10/2021	11/10/2021	10/10/2021	11/10/2021

- - - - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.0	8 October 2021	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 03.0 of the “CDM project standard for programmes of activities” (CDM-EB93-A07-STAN).
04.0	6 April 2021	Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM project standard for programmes of activities” (CDM-EB93-A07-STAN); • Add a section on remarks on the observance of the scale limit of small-scale CPAs during the crediting periods; • Add "changes specific to afforestation or reforestation activities/CPA" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R PoAs between two commitment periods; • Make structural and editorial improvements.
02.0	7 June 2017	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 01.0 of the “CDM project standard for programmes of activities (CDM-EB93-A07-STAN); • Make editorial improvements.
01.0	1 April 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report, programme of activities		