 <p style="text-align: center;"><b>Monitoring report form for CDM project activity</b> <b>(Version 09.0)</b></p>			
Complete this form in accordance with the instructions attached at the end of this form.			
<b>MONITORING REPORT</b>			
<b>Title of the project activity</b>	"5 MW renewable energy project for a grid system" at Rohru Tehsil, Shimla district in Himachal, India.		
<b>UNFCCC reference number of the project activity</b>	1363		
<b>Version number of the PDD applicable to this monitoring report</b>	03		
<b>Version number of this monitoring report</b>	01		
<b>Completion date of this monitoring report</b>	24.02.2022		
<b>Monitoring period number</b>	02		
<b>Duration of this monitoring period</b>	02/06/2011 to 11/06/2019 (Inclusive of both days)		
<b>Monitoring report number for this monitoring period</b>	01		
<b>Project participants</b>	Gowthami Hydro Electric Company (P) Limited.		
<b>Host Party</b>	India		
<b>Applied methodologies and standardized baselines</b>	AMS-I.D. Ver 10- Grid connected renewable electricity generation		
<b>Sectoral scopes</b>	01 : Energy industries (renewable - / non-renewable sources)		
<b>Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period</b>	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 December 2020	Amount achieved from 1 January 2021
	25,101 tCO <sub>2</sub>	88,646 tCO <sub>2</sub>	-
<b>Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD</b>	115,489 tCO <sub>2</sub>		

## SECTION A. Description of project activity

### A.1. General description of project activity

>> Gowthami Hydro Electric Company Private Limited (GHECPL) has implemented small hydropower project with two units of 2.5 MW each totalling to 5.0 MW on run of the river scheme across Andhra Khad, a tributary of Paddar River near Gaskuwari village of Shimla District in Himachal Pradesh state.

The project activity comprises a diversion structure, water conducting system, feeder channel, desilting tank, power channel, fore-bay tank, penstock, power house, and tail race channel. The project is constructed upstream of the existing 16.95MW Andhra-I hydroelectric plant of Himachal Pradesh state Electricity Board (HPSEB). The generated voltage 11KV is stepped up to 66KV and evacuated from 16.95MW Andhra HEP Switchyard. In this process there are no greenhouse gas emissions or burning of any fossil fuels. Thus electricity is generated through sustainable means without causing any negative effect on the environment.

Both the Units of project were commissioned on 12/06/2009, from there onwards both units of the project activity are in continuous operation to till date, except during the period of January 2019 to June 2019 when the plant has been shut down due to strike by the plant employees.

The present monitoring period is chosen from 02/06/2011 to 11/06/2019. The net electricity exported to the state grid by the project activity is 143.561 GWh and the net emission reductions are 113,747 tCO<sub>2</sub>e for the present monitoring period.

### Contribution of project activity to sustainable development:

Ministry of Environment and Forests (MoEF), Government of India, has stipulated the following indicators for sustainable development in the interim approval guidelines for CDM project.

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

The project activity contributes to the above indicators in the following manner.

#### Social Well-Being:

The small hydro project on Paddar River is established in a rural area. Majority of population in this area depend on marginal cultivation in the terraced fields or work as labourers for their livelihood. The economic condition of the area is poor due to low agricultural yield and adverse climatic conditions.

Setting up of the hydro project has opened employment opportunities in the local area during construction and operation phase by making available clean hydro power especially for power intensive industries and cater to its population for their socio-economic upliftment as well as improving their living conditions.

The project activity feeds the generated power to the nearest HPSEB substation, energy availability and quality of the power improves significantly under the service area of the substation.

**Economic Well-Being:**

Project proponent will mobilised investment in the region to an extent of about Rs. 258 millions which otherwise would not have happened in the absence of the project activity. This is a significant investment in a hilly area. The project proponent has developed basic infrastructures like road, communication facilities etc and the same could be utilised by the local population.

**Environmental Well-Being:**

The proposed project activity utilises hydro potential available for power generation. The state of Himachal Pradesh is a part of the Indian regional grid system where power generation is dominated by fossil fuels. The project activity will not result in increase of GHG emissions and hence cause no negative impact on the environment both at local as well as at the global level. Further, the project activity does not result in degradation of any natural resources, health standards, etc. at the project area. The project will not cause any air, water, or noise pollution.

**Technological Well-Being:**

The project is a result in utilisation of environmentally safe and sound technologies in small-scale hydroelectric power sector. Further, the project demonstrates harnessing hydro potential in small streams and encourages setting up of such new projects in future. Thereby, the project generated real, measurable and long term emission reductions.

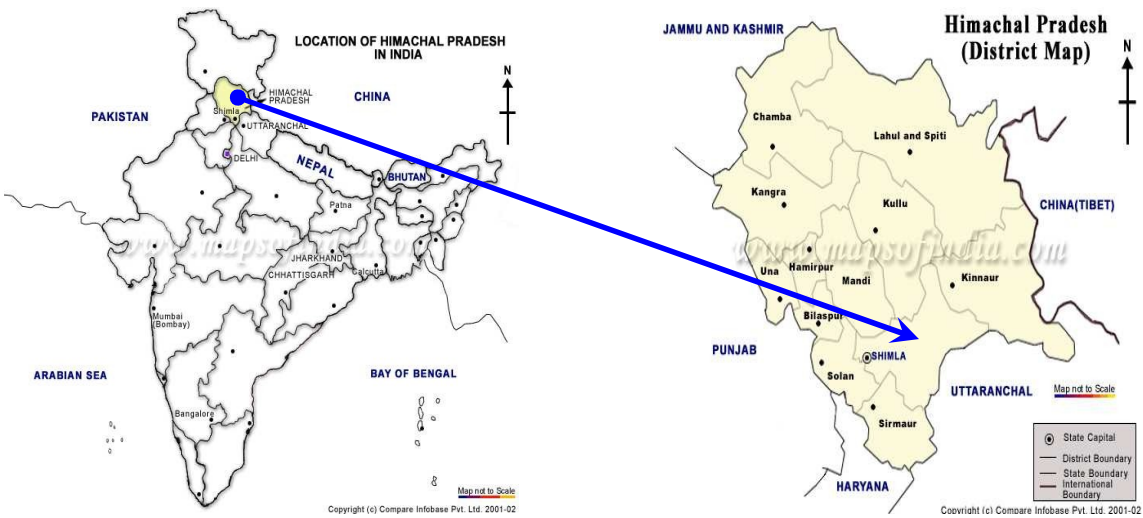
The above benefits due to the project activity is ensuring that the project would contribute to the sustainable development of the region.

**A.2. Location of project activity**

>> The location of project activity is:

Village	:	Gaskuwari
Taluk	:	Rohru
District	:	Shimla
State	:	Himachal Pradesh
Country	:	India.

The geographical co-ordinates of the location are 77° 0' to 78°19' East (longitude) and 30° 45' to 31°44' North (latitude). Physical location of the project is marked in the maps below:



Location of Himachal Pradesh state in India

Location of Shimla District in Himachal Pradesh



Location of 5MW Gowthami SHP in Shimla District

**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 (host Party)	Private Entity: Gowthami Hydro Electric Company (P) Limited	No

**A.4. References to applied methodologies and standardized baselines**

Title : **Type I**, Renewable Energy Projects  
 Reference : **AMS-I.D. Grid connected renewable electricity generation**  
 Version : **Version 10**, AMS-I.D, Scope: 01

**A.5. Crediting period type and duration**

>>12/06/2009 to 11/06/2019 (Fixed)

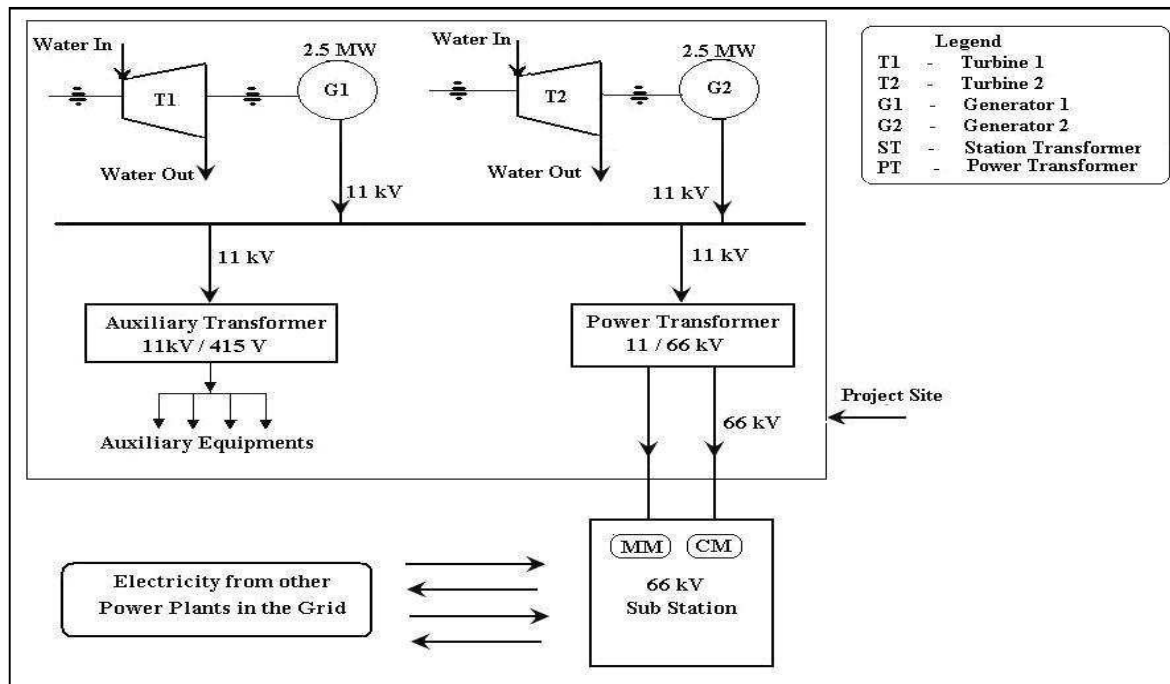
**SECTION B. Implementation of project activity****B.1. Description of implemented project activity**

>> The technology or power generation process using hydro resources is converting the potential energy available in the water flows into mechanical energy using hydro turbines and then to electrical energy using alternators. The generated power will be transformed to match the nearest grid sub-station for proper interconnection and smooth evacuation of power.

The details of major equipment of the project activity are furnished below:

Equipment Specifications			
<b><u>Turbine:</u></b>		<b><u>Generator:</u></b>	
Make	: Boving Fouress Ltd.	Make	: Kirloskar Electrical Co. Ltd.,
Type	: Horizontal Francis	Capacity	: 2500 kW
Power rating	: 2500 kW	Power factor	: 0.85
Quantity	: 2 Nos.	Voltage	: 11 kV
		Frequency	: 50 Hz
		Quantity	: 2 Nos.

Detailed technical process diagram of the project activity is furnished below



The project activity has been commissioned on 12/06/2009 and registered with CDM EB on 15/04/2008. The project promoter has installed all monitoring equipments to monitor the parameters, which are described in the registered CDM-PDD.

The plant has been operated effectively by interchanging between the two units during less water flows in the river.

No significant events occurred during this monitoring period, which may impact the applicability of the methodology.

## B.2. Post-registration changes

### B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

>>

There is no temporary deviation from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents during the current monitoring period.

### B.2.2. Corrections

There are no corrections during the current monitoring period.

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

>>

Crediting period of the project activity is from 12/06/2009 to 11/06/2019 (Fixed).

The crediting period of the project activity was from 15/04/2008 to 14/04/2018. This was changed to 12/06/2009 to 11/06/2019 (Fixed).

For reference, please check link

[CDM: 5 MW renewable energy project for a grid system" at Rohru Tehsil, Shimla District in Himachal, India \(unfccc.int\)](http://unfccc.int)

#### B.2.4. Inclusion of monitoring plan

>>

There is no inclusion of 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 methodological regulatory documents

>>

There are no permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents Changes to project design during the current monitoring period.

#### B.2.6. Changes to project design

>>

NA

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

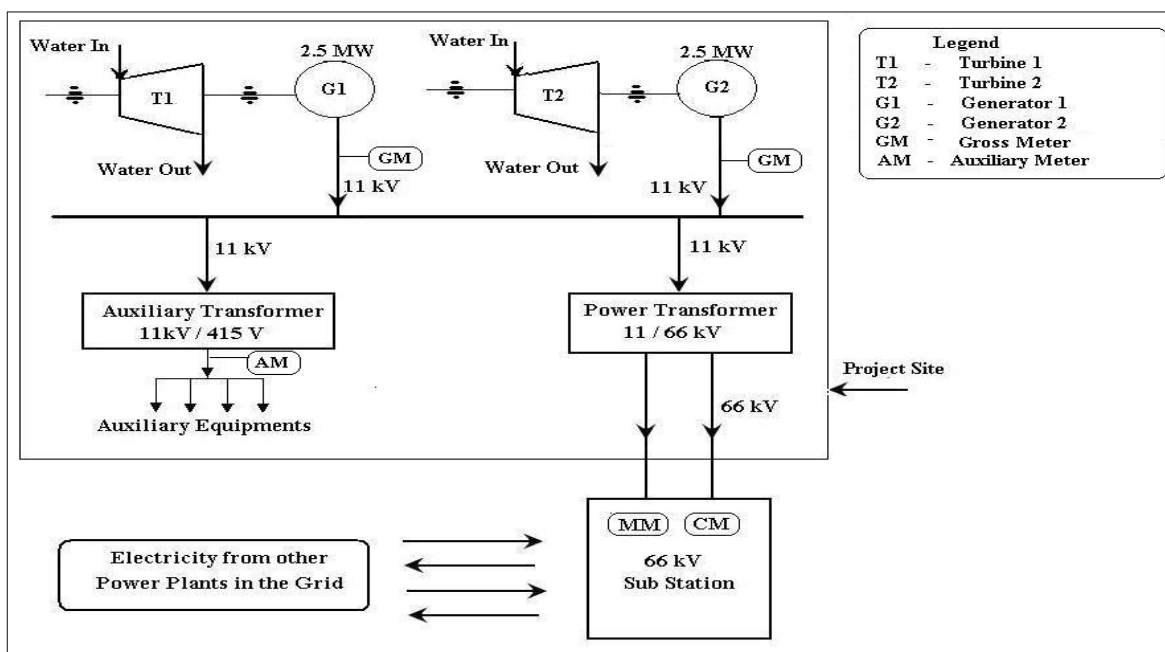
>>

NA

### SECTION C. Description of monitoring system

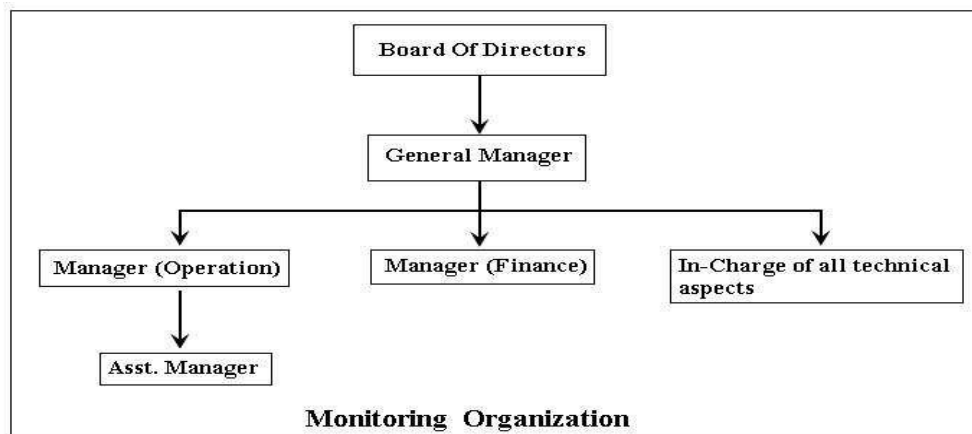
>>

The project had been provided the monitoring equipments which were described in the registered CDM-PDD and the line diagram for the monitoring parameters are furnished below:



### CDM Monitoring Organization

A CDM monitoring team has been formed in Gowthami Hydro Electric Company (P) Limited (GHECPL) for monitoring and verification of all the monitoring parameters as per the guidelines formulated by the management of GHECPL. Qualified and trained people monitor the parameters and emission reduction calculations. GHECPL is the sole agency responsible for implementation and monitoring of the project activity. The monitoring organization structure is shown below:



### Roles and Responsibilities

#### **Board of Directors**

The authority and responsibility for monitoring, measuring, reporting and reviewing of the data rests with the Board of Directors. The Board has delegated the same to General Manager.

#### **General Manager**

The General Manager is the person who is responsible for GHG monitoring activities in the project activity. He has appointed Manager (Operation), In-Charge of Technical Aspects and Manager (Finance) to assist him. He is responsible for review the monthly reports submitted by Plant Manager (Operations) and prepare report on operational conditions of plant also compiling the data on electricity export to the grid system for submission to the Board of Directors.

The responsibility of storage and archiving of information in good condition also lies with the General Manager.

#### **Manager (Operation)**

Manager (Operation) is responsible for the electricity generations at project site. He will review the monitored parameters for correctness and take corrective measures in case of minor errors in the monitored data. He also verifies the report prepared by Asst. Manager on daily summary of project operation & electricity generations and report to General Manager if any abnormality. The calibration of the meters installed are taken care by him as per the monitoring plan.

#### **Asst. Manager**

Asst. Manager will record electricity meter readings on daily basis & also take note of gross power generation, auxiliary power consumption and electricity exported to grid., plant shut down times, if any etc. Daily report will be sent to the Manager (operation) for verification.



**In-Charge of Technical Aspects**

In-Charge of Technical Aspects looks after the technical operation of plant. He daily observes the plant equipments, monitor the functioning of these equipments and inform General Manager for any maintenance work to be done.

**Manager (Finance)**

Manager (Finance) is responsible for the revenues of the project. He will review the electricity export and import details and raise invoices to the electricity board regarding payments and report to General Manager. He is also responsible for the financial issues regarding operation of the project activity.

**Calibration**

Main and Check meters are being tested and certified at least once in every six months against an accepted laboratory standard meter in accordance with electricity standards. The calibration of the meters is carried out by Power Grid Corporation of India Ltd. (A Govt. of India Enterprise). The meters are deemed to be working satisfactorily if the errors are within the meter specifications of 0.2 accuracy class.

**Methods of data transfer and archiving policy**

The data will be recorded by plant personnel at the project site and also the monthly export & import readings will be recoded & certified by HPSEB officials. The electricity generation and distribution structure will be measured using calibrated meters. Records of measurements will be used for verification of emissions reductions. Sales bills / receipts may be compared as an alternative proof of the electricity exported to the grid.

**SECTION D. Data and parameters****D.1. Data and parameters fixed ex ante**

<b>Data/Parameter</b>	<b>EF<sub>y</sub></b>
Unit	tCO <sub>2</sub> /GWh
Description	Combined margin emission factor of Northern Grid
Source of data	CEA Published grid emission factor
Value(s) applied	793
Choice of data or measurement methods and procedures	The emission factors in the CO <sub>2</sub> database of CEA are compiled specifically for application by grid-connected CDM projects. The emission factors are consistent with ACM0002 (Version 6) and AMS I.D (Version 10).
Purpose of data/parameter	To calculate Baseline emissions
Additional comments	The value is considered as ex-ante for the entire crediting period. The value from Registered PDD is taken for calculations during the present monitoring period.

<b>Data/Parameter</b>	<b>COEF<sub>i</sub></b>
Unit	kgCO <sub>2</sub> /TJ
Description	CO <sub>2</sub> emission coefficient of fuel type i
Source of data	IPCC 2006 default values
Value(s) applied	74000
Choice of data or measurements methods and procedures	-
Purpose of data/parameter	Calculating Project emissions

Additional comment:	The project activity may combust only one type of fossil fuel, i.e., diesel during the project operation to meet the emergency power requirement of the project. Hence only emission factor of diesel is provided in the parameter.
---------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## D.2. Data and parameters monitored

(Copy this table for each data or parameter.)

Data/Parameter	EG gross,y
Unit	GWh
Description	Total electricity generated by the project
Measured/calculated/Default	On-site measurement
Source of data	Daily Log books maintained at project site
Value(s) of monitored parameter	145.398 (The month wise Generation details are provided in Annexure-1)
Monitoring equipment	Serial No. : 13109TM1207 (Unit-I) & 13100TM1207(Unit-II) Model No. : EM- 05 Accuracy class : 1 Calibration Frequency: Industrial Standards but once in an year Date of Calibrations: 06/06/2010
Measuring/reading/recording frequency	Measured continuously recorded daily and aggregated monthly.
Calculation method (if applicable)	This value is used for cross check the electricity exported to grid by the project activity.
QA/QC procedures	The meters are calibrated as per industry standards of host country
Purpose of data/parameter	Data is used to cross verify with Joint Meter Readings
Additional comments	The meters are not calibrated as per industrial standards of energy meters

Data/Parameter	EGAuxiliary
Unit	GWh
Description	Auxiliary electricity consumption of the project
Measured/calculated/Default	On-site measurement
Source of data	Daily Log books maintained at project site.
Value(s) of monitored parameter	0.870 ( The month wise Auxiliary consumption details are provided in Annexure-1)
Monitoring equipment	Serial No. : 12/06/150626/16 Model No. : EM - 05 Accuracy class : 1.0 Calibration Frequency : Industrial Standards but once in an year Date of Calibrations : 06/06/2010
Measuring/reading/recording frequency	Measured continuously, recorded daily and aggregated monthly.
Calculation method (if applicable)	This value is used for cross check the electricity exported to grid by the project activity.
QA/QC procedures	The meters are not calibrated as per industrial standards of energy meters.
Purpose of data/parameter	Left Blank Intentionally
Additional comments	The meter is not calibrated as per industrial standards of energy meters

<b>Data/Parameter</b>	<b>EG<sub>export</sub>,y</b>
Unit	GWh
Description	Electricity supplied to the grid by the project
Measured/calculated/Default	Measured at Grid interconnection point
Source of data	Monthly Joint Meter Readings Reports certified by HPSEB officials
Value(s) of monitored parameter	143.659 (Please see Annex-1 for monthly values).
Monitoring equipment	<p>Main Meter: Serial No. : 03130512 and 09142050 Type: ER 300P Make: L&amp;T Accuracy Class: 0.2s Calibration Frequency: Once in six months as per PPA Date of Calibration: Details are provided under Table:1</p> <p>Check Meter: Serial No. : 03130513 and 09141986 Type: E3M021 &amp; ER 300P Make: Secure &amp; L&amp;T Accuracy Class: 0.2s Calibration Frequency: Once in six months as per PPA Date of Calibration: Details are provided under Table: 1</p>
Measuring/reading/recording frequency	Measured continuously and recorded monthly.
Calculation method (if applicable)	Meters are recalibrated & inspected periodically by HPSEB. Records of measurements are used for verification of emissions reductions. Sales bills / receipts are used for cross verification.
QA/QC procedures	---
Purpose of data/parameter	To Calculate Baseline emissions
Additional comments	-

<b>Data/Parameter</b>	<b>EG<sub>import</sub> ,y</b>
Unit	GWh
Description	Grid electricity import to the project activity
Measured/calculated/Default	On-site measurements
Source of data	Monthly Joint Meter Readings Reports certified by HPSEB officials
Value(s) of monitored parameter	0.097 (The month wise electricity import details are provided in Annex-1)
Monitoring equipment	<p>Main Meter: Serial No. : 03130512 and 09142050 Type: ER 300P Make: L&amp;T Accuracy Class: 0.2s Calibration Frequency: Once in six months as per PPA Date of Calibration: Details are provided under Table:1</p> <p>Check Meter:</p>

**CDM-MR-FORM**

	Serial No. : 03130513 and 09141986 Type: E3M021 & ER 300P Make: Secure & L&T Accuracy Class: 0.2s Calibration Frequency: Once in six months as per PPA Date of Calibration: Details are provided under Table: 1
Measuring/reading/recording frequency	Measured continuously and Recording Monthly
Calculation method (if applicable)	---
QA/QC procedures	Meters are recalibrated & inspected periodically by HPSEB. Records of measurements are used for verification of emissions reductions. Sales bills / receipts are used for cross verification.
Purpose of data/parameter	To Calculating Baseline emissions
Additional comments	-

<b>Data/Parameter</b>	<b>EG<sub>Net export,y</sub></b>
Unit	GWh
Description	Net Power Exported to Grid
Measured/calculated/Default	Imported value is Subtracted from Export value.
Source of data	Monthly Joint Meter Readings Reports certified by HPSEB officials
Value(s) of monitored parameter	143.561 (Please see Annex-1 for monthly values).
Monitoring equipment	<p>For measuring the energy delivered by the project activity at the interconnection point, one set of Main meter (part of interconnection facility) and check meter will be provided by the company and the HPSEB at the interconnection point.</p> <p>Monthly joint meter readings of the main meter and check meter at the interconnection point will be taken by the designated officials of the company and HPSEB on the synchronisation date of each unit as well as at 12 Hrs on the first day of the next month and subsequently at 12 Hrs of the first day of each month. The joint meter readings will be recorded and signed by the authorised representative of both the parties on each of the above instances.</p>
Measuring/reading/recording frequency	Measured continuously and recorded monthly.
Calculation method (if applicable)	Meters are recalibrated & inspected periodically by HPSEB. Records of measurements are used for verification of emissions reductions. Sales bills / receipts are used for cross verification.
QA/QC procedures	---
Purpose of data/parameter	To Calculate Baseline emissions
Additional comments	--

<b>Data/Parameter</b>	<b>F<sub>i,y</sub></b>
-----------------------	------------------------

Unit	Litres
Description	Quantity of fossil fuel type <i>i</i> combusted in the project plant during year <i>y</i>
Measured/calculated/Default	On-site measurements
Source of data	Fuel purchase receipts
Value(s) of monitored parameter	23541.99 (The month wise diesel procurement details are provided in Annexure-2)
Monitoring equipment	---
Measuring/reading/recording frequency	Recorded monthly.
Calculation method (if applicable)	---
QA/QC procedures	The data recorded can be cross checked against the fuel purchase receipts.
Purpose of data/parameter	To calculate Project emissions
Additional comments	-

Table 1: Main / Check meters Recalibration Test Details

S. No.	Main/Check	Serial No.	Period of usage	Date of calibration	Validity (As per PPA)
<b>Main/ Check Meter</b>					
1	Main Meter	03130512	02.06.2011 to 30.09.2011	08.03.2011	08.03.2012
	Check Meter	03130513	02.06.2011 to 30.09.2011	08.03.2011	08.03.2012
2	Main Meter	09142050	01.10.2011 to 31.05.2012	20.12.2012	20.12.2013
	Check Meter	09141986	01.10.2011 to 31.05.2012	19.12.2012	19.12.2013
3	Main Meter	03130512	01.06.2012 to 28.02.2013	17.05.2012	17.05.213
	Check Meter	03130513	01.06.2012 to 28.02.2013	17.05.2012	17.05.213
4	Main Meter	09142050	01.03.2013 to 25.11.2013	20.12.2012	20.12.2013
	Check Meter	09141986	01.03.2013 to 25.11.2013	19.12.2012	19.12.2013
5	Main Meter	03130512	25.11.2013 to 02.06.2014	23.11.2013	10.01.2014
	Check Meter	03130513	25.11.2013 to 02.06.2014	23.11.2013	10.01.2014

S. No.	Main/Check	Serial No.	Period of usage	Date of calibration	Validity (As per PPA)
6	Main Meter	09142050	02.06.2014 to 13.01.2015	29.05.2014	14.01.2015
	Check Meter	09141986	02.06.2014 to 13.01.2015	29.05.2014	14.01.2015
7	Main Meter	03130512	13.01.2015 to 24.08.2015	Not Calibrated	–
	Check Meter	03130513	13.01.2015 to 24.08.2015	Not Calibrated	–
8	Main Meter	09142050	24.08.2015 to 03.05.2016	10.08.2015	14.01.2016
	Check Meter	09141986	24.08.2015 to 03.05.2016	10.08.2015	14.01.2017
9	Main Meter	03130512	03.05.2016 to 05.06.2017	29.04.2016	18.01.2017
	Check Meter	03130513	03.05.2016 to 05.06.2017	29.04.2016	18.01.2017
10	Main Meter	09142050	05.06.2017 to 11.06.2019	31.05.2017	07.02.2018
	Check Meter	09141986	05.06.2017 to 11.06.2019	31.05.2017	07.02.2018

**D.3. Implementation of sampling plan**

&gt;&gt;

NA

**SECTION E. Calculation of emission reductions or net anthropogenic removals****E.1. Calculation of baseline emissions or baseline net removals**

&gt;&gt;

The baseline emissions are calculated as follows:

$$BE_y = EG_y * EF_y$$

Where,

EG<sub>y</sub> is the net electricity export to grid in a given year (GWh)[EG<sub>y</sub> = EG<sub>Export</sub> – EG<sub>Import</sub>]EF<sub>y</sub> is the emission factor for a given year (tCO<sub>2</sub>/GWh)

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

&gt;&gt;

The project emissions due to usage of fossil fuel (Diesel) are calculated

as:

$$PE_{\text{diesel},y} = (F_{i,y} * \text{Density}_i * \text{NCV}_{\text{diesel}} * EF_{\text{CO}_2 i}) * \text{OXID} / 10^6$$

Where,

$F_{i,y}$  : The quantity of diesel used during the year (Ltrs)

$\text{Density}_i$  : Density of diesel (0.845 kg/Ltr. as per Indian Oil Corporation Limited.)

<https://iocl.com/Contents/Upload/HSD-BS-IVand-BS-VI.pdf>

$\text{NCV}_{\text{diesel}}$  : The calorific value of diesel (43.3 TJ/Gg as per IPCC 2006 default value)

$EF_{\text{CO}_2 i}$  : The CO2 emission factor of Diesel (74.8 t CO2/TJ as per IPCC 2006)

OXID: The oxidation factor of the coal (1 as per IPCC 2006 default value)

**E.3. Calculation of leakage emissions**

&gt;&gt;

Leakage is not considered from the project activity.

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

	Baseline GHG emissions or baseline net GHG removals (t CO <sub>2</sub> e)	Project GHG emissions or actual net GHG removals (t CO <sub>2</sub> e)	Leakage GHG emissions (t CO <sub>2</sub> e)	GHG emission reductions or net anthropogenic GHG removals (t CO <sub>2</sub> e)			
				Before 01/01/2013	From 01/01/2013 until 31/12/2020	From 01/01/2021	Total amount
<b>Total</b>	113,812*	65	--	25,101	88,646	--	113,747
*Note : The baseline emission is 113,843 t CO <sub>2</sub> e. After accounting for the emission reduction of 31 t CO <sub>2</sub> e due to delay in calibration, the baseline emission reduction works out to 113,812 t CO <sub>2</sub> e							

**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 <sub>2</sub> e)	Amount estimated ex ante for this monitoring period in the PDD (t CO <sub>2</sub> e)
113,747	115,489

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

&gt;&gt;

Considering the annual average emission reductions as per the registered PDD which is 14,380 tCO<sub>2</sub>e per year, the number of days during the current monitoring period to be 2932 days.

**E.6. Remarks on increase in achieved emission reductions**

>>

During the present reporting period the project activity has achieved 1.51% less emissions reduction as compared with emissions indicated in Registered CDM- PDD. The main reasons for less generation during the monitored period are given below:

Due to employees strike during January 2019 to June 2019, no generation from the plant. This caused less generation from the plant than the envisaged and hence the lower emission reductions.

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

>>

The project activity remains as a Small scale project activity for the entire crediting period



## Annex-1

S.No.	Monitoring Period	Gross Electricity Generation, kWh [EG <sub>gross,y</sub> ]			Auxiliary consumption, [EG <sub>Auxiliary,y</sub> ]	Electricity Exported to Grid [EG <sub>export,y</sub> ]	Electricity Imported from Grid [EG <sub>import,y</sub> ]	Net Electricity Exported [EG <sub>v</sub> ] without application of correction factor due to delay in calibration	
		Unit-I	Unit-II	Total	kWh	kWh	kWh	kWh	GWh
1	02.06.2011 to 30.06.2011	998600	1714500	2713100	10350	2692070	290	26,91,780	2.69
2	01.07.2011 to 31.07.2011	1441200	1346100	2787300	10820	2747400	1200	27,46,200	2.75
3	01.08.2011 to 31.08.2011	1530100	1602300	3132400	11030	3121000	1900	31,19,100	3.12
4	01.09.2011 to 30.09.2011	1633100	1419600	3052700	12870	3049250	200	30,49,050	3.05
5	01.10.2011 to 31.10.2011	1212200	589600	1801800	11990	1777700	100	17,77,600	1.78
6	01.11.2011 to 30.11.2011	382300	587700	970000	13400	949700	200	9,49,500	0.95
7	01.12.2011 to 31.12.2011	0	600100	600100	13720	580000	100	5,79,900	0.58
8	01.01.2012 to 31.01.2012	0	244600	244600	8333	233300	200	2,33,100	0.23
9	01.02.2012 to 29.02.2012	0	286600	286600	12470	267200	2700	2,64,500	0.26
10	01.03.2012 to 31.03.2012	0	0	0	0	500	3200	-2,700	0.00
11	01.04.2012 to 30.04.2012	410200	703200	1113400	9550	1086600	2400	10,84,200	1.08
12	01.05.2012 to 31.05.2012	1194200	1019600	2213800	10270	2200550	100	22,00,450	2.20
13	01.06.2012 to 30.06.2012	348600	1742200	2090800	8420	2057050	0	20,57,050	2.06
14	01.07.2012 to 31.07.2012	1619700	342500	1962200	8400	1936300	150	19,36,150	1.94
15	01.08.2012 to 31.08.2012	1152600	1241200	2393800	6600	2362500	1550	23,60,950	2.36
16	01.09.2012 to 30.09.2012	1346400	1956300	3302700	11400	3256500	500	32,56,000	3.26
17	01.10.2012 to 31.10.2012	237900	1635000	1872900	11750	1849400	0	18,49,400	1.85
18	01.11.2012 to 30.11.2012	56900	915900	972800	11170	955800	50	9,55,750	0.96

S.No.	Monitoring Period	Gross Electricity Generation, kWh [EG <sub>gross,y</sub> ]			Auxiliary consumption, [EG <sub>Auxiliary,y</sub> ]	Electricity Exported to Grid [EG <sub>export,y</sub> ]	Electricity Imported from Grid [EG <sub>import,y</sub> ]	Net Electricity Exported [EG <sub>v</sub> ] without application of correction factor due to delay in calibration	
		Unit-I	Unit-II	Total	kWh	kWh	kWh	kWh	GWh
19	01.12.2012 to 31.12.2012	423900	170100	594000	14980	573650	1350	5,72,300	0.57
20	01.01.2013 to 31.01.2013	159800	88400	248200	6690	235350	50	2,35,300	0.24
21	01.02.2013 to 28.02.2013	0	0	0	0	0	150	-150	0.00
22	01.03.2013 to 31.03.2013	408000	726400	1134400	7920	1120650	0	11,20,650	1.12
23	01.04.2013 to 30.04.2013	782900	1519500	2302400	11310	2277300	0	22,77,300	2.28
24	01.05.2013 to 31.05.2013	1609600	1556100	3165700	6500	3127500	100	31,27,400	3.13
25	01.06.2013 to 30.06.2013	1494600	1552700	3047300	9720	3014300	1000	30,13,300	3.01
26	01.07.2013 to 31.07.2013	1770800	1822100	3592900	8700	3554800	300	35,54,500	3.55
27	01.08.2013 to 31.08.2013	1433100	1589900	3023000	10870	2990600	1200	29,89,400	2.99
28	01.09.2013 to 30.09.2013	1350400	1694600	3045000	12120	3012300	0	30,12,300	3.01
29	01.10.2013 to 31.10.2013	578000	1386800	1964800	11620	1941700	100	19,41,600	1.94
30	01.11.2013 to 30.11.2013	1145900	0	1145900	9030	1124650	100	11,24,550	1.12
31	01.12.2013 to 31.12.2013	567000	28300	595300	11790	577700	1950	5,75,750	0.58
32	01.01.2014 to 31.01.2014	514000	0	514000	15420	492250	700	4,91,550	0.49
33	01.02.2014 to 28.02.2014	217400	0	217400	8020	206900	1250	2,05,650	0.21
34	01.03.2014 to 31.03.2014	584100	75100	659200	15070	642600	4900	6,37,700	0.64
35	01.04.2014 to 30.04.2014	1041900	819500	1861400	13950	1836650	350	18,36,300	1.84
36	01.05.2014 to 31.05.2014	1709500	1628300	3337800	11500	3301150	100	33,01,050	3.30
37	01.06.2014 to 30.06.2014	1498900	1710900	3209800	9890	3179150	0	31,79,150	3.18
38	01.07.2014 to 31.07.2014	1279100	1313700	2592800	11010	2566500	1400	25,65,100	2.57
39	01.08.2014 to 31.08.2014	856900	1714900	2571800	12500	2543000	600	25,42,400	2.54

S.No.	Monitoring Period	Gross Electricity Generation, kWh [EG <sub>gross,y</sub> ]			Auxiliary consumption, [EG <sub>Auxiliary,y</sub> ]	Electricity Exported to Grid [EG <sub>export,y</sub> ]	Electricity Imported from Grid [EG <sub>import,y</sub> ]	Net Electricity Exported [EG <sub>v</sub> ] without application of correction factor due to delay in calibration	
		Unit-I	Unit-II	Total	kWh	kWh	kWh	kWh	GWh
40	01.09.2014 to 30.09.2014	1021900	1445800	2467700	12760	2441500	200	24,41,300	2.44
41	01.10.2014 to 31.10.2014	0	1431500	1431500	9860	1414500	200	14,14,300	1.41
42	01.11.2014 to 30.11.2014	0	732800	732800	9180	717900	100	7,17,800	0.72
43	01.12.2014 to 31.12.2014	0	434000	434000	9390	419000	200	4,18,800	0.42
44	01.01.2015 to 31.01.2015	0	387700	387700	13420	367800	200	3,67,600	0.37
45	01.02.2015 to 28.01.2015	301900	146100	448000	12000	432600	1600	4,31,000	0.43
46	01.03.2015 to 31.03.2015	1144700	238300	1383000	9850	1364300	150	13,64,150	1.36
47	01.04.2015 to 30.04.2015	1668700	811500	2480200	8940	2455000	200	24,54,800	2.45
48	01.05.2015 to 31.05.2015	2014200	1103100	3117300	8570	3088100	100	30,88,000	3.09
49	01.06.2015 to 30.06.2015	1843000	1155200	2998200	7400	2969750	50	29,69,700	2.97
50	01.07.2015 to 31.07.2015	1953100	1489700	3442800	8380	3410800	600	34,10,200	3.41
51	01.08.2015 to 31.08.2015	1901600	1482200	3383800	7830	3352800	600	33,52,200	3.35
52	01.09.2015 to 30.09.2015	1810000	187000	1997000	6070	1987600	100	19,87,500	1.99
53	01.10.2015 to 31.10.2015	1188300	0	1188300	6970	1177100	0	11,77,100	1.18
54	01.11.2015 to 30.11.2015	684800	0	684800	9100	670800	100	6,70,700	0.67
55	01.12.2015 to 31.12.2015	515500	0	515500	8540	503500	400	5,03,100	0.50
56	01.01.2016 to 31.01.2016	361000	0	361000	8870	348500	500	3,48,000	0.35
57	01.02.2016 to 29.02.2016	300000	0	300000	6330	290800	500	2,90,300	0.29
58	01.03.2016 to 31.03.2016	609500	0	609500	6890	599200	200	5,99,000	0.60
59	01.04.2016 to 30.04.2016	513400	976000	1489400	7990	1476100	100	14,76,000	1.48
60	01.05.2016 to 31.05.2016	122300	1642700	1765000	8630	1748750	100	17,48,650	1.75

S.No.	Monitoring Period	Gross Electricity Generation, kWh [EG <sub>gross,y</sub> ]			Auxiliary consumption, [EG <sub>Auxiliary,y</sub> ]	Electricity Exported to Grid [EG <sub>export,y</sub> ]	Electricity Imported from Grid [EG <sub>import,y</sub> ]	Net Electricity Exported [EG <sub>v</sub> ] without application of correction factor due to delay in calibration	
		Unit-I	Unit-II	Total	kWh	kWh	kWh	kWh	GWh
61	01.06.2016 to 30.06.2016	47400	1593100	1640500	5350	1623400	250	16,23,150	1.62
62	01.07.2016 to 31.07.2016	1286900	1461100	2748000	9980	2729150	1000	27,28,150	2.73
63	01.08.2016 to 31.08.2016	1083700	1558400	2642100	10340	2622500	1950	26,20,550	2.62
64	01.09.2016 to 30.09.2016	1167500	1687400	2854900	8730	2835000	0	28,35,000	2.84
65	01.10.2016 to 31.10.2016	189500	1348700	1538200	6150	1524100	50	15,24,050	1.52
66	01.11.2016 to 30.11.2016	0	820500	820500	7180	807250	450	8,06,800	0.81
67	01.12.2016 to 31.12.2016	0	520500	520500	7710	506500	0	5,06,500	0.51
68	01.01.2017 to 31.01.2017	27600	298300	325900	9740	311750	1500	3,10,250	0.31
69	01.02.2017 to 28.02.2017	0	407700	407700	8590	394250	750	3,93,500	0.39
70	01.03.2017 to 31.03.2017	202800	537300	740100	9330	726300	1100	7,25,200	0.73
71	01.04.2017 to 30.04.2017	324700	1831000	2155700	8160	2139400	50	21,39,350	2.14
72	01.05.2017 to 31.05.2017	714600	1367700	2082300	6590	2070250	50	20,70,200	2.07
73	01.06.2017 to 30.06.2017	1719400	452600	2172000	8740	2160150	500	21,59,650	2.16
74	01.07.2017 to 31.07.2017	1608100	1113800	2721900	9670	2706000	1100	27,04,900	2.70
75	01.08.2017 to 31.08.2017	560800	1336900	1897700	9370	1877800	1000	18,76,800	1.88
76	01.09.2017 to 30.09.2017	286800	1526000	1812800	9610	1806100	400	18,05,700	1.81
77	01.10.2017 to 31.10.2017	940100	873400	1813500	9690	1799600	0	17,99,600	1.80
78	01.11.2017 to 30.11.2017	751600	132800	884400	9650	869000	500	8,68,500	0.87
79	01.12.2017 to 31.12.2017	0	700100	700100	10730	683600	100	6,83,500	0.68
80	01.01.2018 to 31.01.2018	0	426200	426200	11840	408100	200	4,07,900	0.41
81	01.02.2018 to 28.01.2018	0	299600	299600	10320	283800	600	2,83,200	0.28

S.No.	Monitoring Period	Gross Electricity Generation, kWh [EG <sub>gross,y</sub> ]			Auxiliary consumption, [EG <sub>Auxiliary,y</sub> ]	Electricity Exported to Grid [EG <sub>export,y</sub> ]	Electricity Imported from Grid [EG <sub>import,y</sub> ]	Net Electricity Exported [EG <sub>v</sub> ] without application of correction factor due to delay in calibration	
		Unit-I	Unit-II	Total	kWh	kWh	kWh	kWh	GWh
82	01.03.2018 to 31.03.2018	15800	330700	346500	9950	332500	1600	3,30,900	0.33
83	01.04.2018 to 30.04.2018	140600	531900	672500	7620	659100	1300	6,57,800	0.66
84	01.05.2018 to 31.05.2018	345400	1004400	1349800	7920	1335600	300	13,35,300	1.34
85	01.06.2018 to 30.06.2018	0	673100	673100	7650	661500	2900	6,58,600	0.66
86	01.07.2018 to 31.07.2018	568500	1595400	2163900	8850	2148200	1300	21,46,900	2.15
87	01.08.2018 to 31.08.2018	1575100	806900	2382000	9980	2364600	700	23,63,900	2.36
88	01.09.2018 to 30.09.2018	1475400	818800	2294200	11490	2278400	700	22,77,700	2.28
89	01.10.2018 to 31.10.2018	1092200	62900	1155100	11190	1139900	1500	11,38,400	1.14
90	01.11.2018 to 30.11.2018	809000	0	809000	8840	794400	100	7,94,300	0.79
91	01.12.2018 to 31.12.2018	396000	0	396000	10660	382300	2200	3,80,100	0.38
92	01.01.2019 to 31.01.2019	0	0	0	0	0	6400	-6,400	-0.01
93	01.02.2019 to 28.02.2019	0	0	0	0	0	0	0	0.00
94	01.03.2019 to 31.03.2019	0	0	0	0	0	0	0	0.00
95	01.04.2019 to 30.04.2019	0	0	0	0	0	0	0	0.00
96	01.05.2019 to 31.05.2019	0	0	0	0	100	5500	-5,400	-0.01
97	01.06.2019 to 11.06.2019	0	0	0	0	100	24800 <sup>1</sup>	-24,700	-0.02
<b>Total</b>		<b>68273200</b>	<b>7,71,25,100</b>	<b>145398300</b>	<b>8,69,743</b>	<b>14,36,58,620</b>	<b>97,490</b>	<b>14,35,61,130</b>	<b>143.561</b>

<sup>1</sup> The Electricity imported from the Grid is as per the JMRs, for a complete month i.e. during June-2019. The same has been considered for the computation as a conservative measure.

Monitoring Period	Diesel Procurement	Diesel Consumed	Project Emission [PE <sub>y</sub> ]
	Lts.	Lts.	tCO <sub>2</sub> e
01.06.2011 to 30.06.2011	0	200	0.00
01.07.2011 to 31.07.2011	1306	0	3.57
01.08.2011 to 31.08.2011	1800	130	4.93
01.09.2011 to 30.09.2011	500	0	1.37
01.10.2011 to 31.10.2011	0	0	0.00
01.11.2011 to 30.11.2011	300	100	0.82
01.12.2011 to 31.12.2011	0	0	0.00
01.01.2012 to 31.01.2012	635	0	1.74
01.02.2012 to 28.02.2012	0	200	0.00
01.03.2012 to 31.03.2012	0	0	0.00
01.04.2012 to 30.04.2012	0	0	0.00
01.05.2012 to 31.05.2012	0	0	0.00
01.06.2012 to 30.06.2012	39.7	150	0.11
01.07.2012 to 31.07.2012	600	0	1.64
01.08.2012 to 31.08.2012	0	0	0.00
01.09.2012 to 30.09.2012	400	150	1.09
01.10.2012 to 31.10.2012	6.96	0	0.02
01.11.2012 to 30.11.2012	0	0	0.00
01.12.2012 to 31.12.2012	531.55	200	1.45
01.01.2013 to 31.01.2013	2587.03	80	7.08
01.02.2013 to 28.02.2013	286.24	280	0.78
01.03.2013 to 31.03.2013	2659.29	440	7.28
01.04.2013 to 30.04.2013	2091.81	0	5.72
01.05.2013 to 31.05.2013	1117.06	140	3.06
01.06.2013 to 30.06.2013	409.96	0	1.12
01.07.2013 to 31.07.2013	885	0	2.42
01.08.2013 to 31.08.2013	19.44	150	0.05
01.09.2013 to 30.09.2013	478.08	50	1.31
01.10.2013 to 31.10.2013	68.38	0	0.19
01.11.2013 to 30.11.2013	487.81	55	1.34
01.12.2013 to 31.12.2013	39.1	280	0.11
01.01.2014 to 31.01.2014	0	0	0.00
01.02.2014 to 28.02.2014	236	195	0.65
01.03.2014 to 31.03.2014	925	20	2.53
01.04.2014 to 30.04.2014	0	240	0.00
01.05.2014 to 01.06.2014	0	120	0.00
01.06.2014 to 30.06.2014	0	50	0.00

Monitoring Period	Diesel Procurement	Diesel Consumed	Project Emission [PE <sub>y</sub> ]
	Lts.	Lts.	tCO <sub>2</sub> e
01.07.2014 to 31.07.2014	0	20	0.00
01.08.2014 to 31.08.2014	0	0	0.00
01.09.2014 to 30.09.2014	0	0	0.00
01.10.2014 to 31.10.2014	0	0	0.00
01.11.2014 to 30.11.2014	0	215	0.00
01.12.2014 to 31.12.2014	55.10	80	0.15
01.01.2015 to 31.01.2015	83	170	0.23
01.02.2015 to 28.02.2015	164	0	0.45
01.03.2015 to 31.03.2015	476	170	1.30
01.04.2015 to 30.04.2015	221	0	0.60
01.05.2015 to 31.05.2015	318	170	0.87
01.06.2015 to 30.06.2015	20	0	0.06
01.07.2015 to 31.07.2015	200	0	0.55
01.08.2015 to 31.08.2015	282	170	0.77
01.09.2015 to 30.09.2015	200	0	0.55
01.10.2015 to 31.10.2015	65.27	0	0.18
01.11.2015 to 30.11.2015	13.22	0	0.04
01.12.2015 to 31.12.2015	47	50	0.13
01.01.2016 to 31.01.2016	0	60	0.00
01.02.2016 to 28.02.2016	57	180	0.16
01.03.2016 to 31.03.2016	266	20	0.73
01.04.2016 to 30.04.2016	761	300	2.08
01.05.2016 to 31.05.2016	50	75	0.14
01.06.2016 to 30.06.2016	28	0	0.08
01.07.2016 to 31.07.2016	261.72	0	0.72
01.08.2016 to 31.08.2016	501	250	1.37
01.09.2016 to 30.09.2016	0	0	0.00
01.10.2016 to 31.10.2016	39	0	0.11
01.11.2016 to 30.11.2016	55	0	0.15
01.12.2016 to 31.12.2016	0	0	0.00
01.01.2017 to 31.01.2017	257	30	0.70
01.02.2017 to 28.02.2017	27	0	0.07
01.03.2017 to 31.03.2017	123	170	0.34
01.04.2017 to 30.04.2017	283	0	0.78
01.05.2017 to 31.05.2017	39	0	0.11
01.06.2017 to 30.06.2017	40	40	0.11
01.07.2017 to 31.07.2017	0	40	0.00
01.08.2017 to 31.08.2017	0	0	0.00
01.09.2017 to 30.09.2017	0	80	0.00
01.10.2017 to 31.10.2017	0	0	0.00

Monitoring Period	Diesel Procurement	Diesel Consumed	Project Emission [PE <sub>y</sub> ]
	Lts.	Lts.	tCO <sub>2</sub> e
01.11.2017 to 30.11.2017	0	0	0.00
01.12.2017 to 31.12.2017	0	0	0.00
01.01.2018 to 31.01.2018	200	0	0.55
01.02.2018 to 28.02.2018	0	0	0.00
01.03.2018 to 31.03.2018	0	0	0.00
01.04.2018 to 30.04.2018	0	0	0.00
01.05.2018 to 31.05.2018	0	175	0.00
01.06.2018 to 30.06.2018	0	0	0.00
01.07.2018 to 31.07.2018	0	0	0.00
01.08.2018 to 31.08.2018	0	40	0.00
01.09.2018 to 30.09.2018	0	0	0.00
01.10.2018 to 31.10.2018	0	150	0.00
01.11.2018 to 30.11.2018	0	0	0.00
01.12.2018 to 31.12.2018	0	260	0.00
01.01.2019 to 31.01.2019	0	0	0.00
01.02.2019 to 28.02.2019	0	0	0.00
01.03.2019 to 31.03.2019	0	0	0.00
01.04.2019 to 30.04.2019	0	0	0.00
01.05.2019 to 31.05.2019	0	0	0.00
01.06.2019 to 11.06.2019	0	0	0.00
<b>Total</b>	<b>23541.99</b>	<b>6145.00</b>	<b>65.00</b>

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## Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
09.0	8 October 2021	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 03.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN).</li> </ul>
08.0	6 April 2021	Revision to: <ul style="list-style-type: none"> <li>• Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).</li> </ul>
07.0	31 May 2019	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 02.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN);</li> <li>• Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period;</li> <li>• Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes;</li> <li>• Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods;</li> <li>• Make editorial improvements.</li> </ul>
06.0	7 June 2017	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 01.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN);</li> <li>• Make editorial improvements.</li> </ul>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> <li>• Include provisions related to delayed submission of a monitoring plan;</li> <li>• Provisions related to the Host Party;</li> <li>• Remove reference to programme of activities;</li> <li>• Overall editorial improvement.</li> </ul>
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> <li>• Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0));</li> <li>• Include provisions related to standardized baselines;</li> <li>• Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1;</li> <li>• Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>;</li> <li>• Editorial improvement.</li> </ul>
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.

<i>Version</i>	<i>Date</i>	<i>Description</i>
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).
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		