



**Monitoring report form for CDM project activity
(Version 09.0)**

Complete this form in accordance with the instructions attached at the end of this form.

MONITORING REPORT

Title of the project activity	1.725 MW Mini Hydel Scheme on Nagavali River, Andhra Pradesh, India		
UNFCCC reference number of the project activity	1566		
Version number of the PDD applicable to this monitoring report	03		
Version number of this monitoring report	01		
Completion date of this monitoring report	04-02-2022		
Monitoring period number	02		
Duration of this monitoring period	24/12/2011 to 02/06/2019 (Inclusive of both days)		
Monitoring report number for this monitoring period	01		
Project participants	Sardar Power Limited		
Host Party	India		
Applied methodologies and standardized baselines	AMS-I.D. ver. 13 - Grid connected renewable electricity generation		
Sectoral scopes	1: Energy industries (renewable - / non-renewable sources)		
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 st December 2020	Amount achieved from 1 January 2021
	4,597 tCO ₂	22,852 tCO ₂	-
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	41,396 tCO ₂		

SECTION A. Description of project activity

A.1. General description of project activity

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The project activity is a hydro project of capacity 1.725 MW constructed on Nagavali River at the downstream of Thotapalli Reservoir in Vizianagaram District of Andhra Pradesh, India. The main purpose of the project activity is generation of electricity using hydro potential available in the river and exporting the generated power to Andhra Pradesh Transmission Corporation Limited (APTRANSCO), a state owned power utility company.

The project activity comprises a conveyance channel, control structure, flushing conduit, desilting tank, power channel, forebay, penstock, power house, and tail race channel. The power from the project activity will be evacuated through 33/11 kV Naguru Sub-station. 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.

The project activity was commissioned on 17/07/2008 with state grid and registered as CDM project on 03/06/2009.

The present monitoring period is chosen from 24/12/2011 to 02/06/2019. The net electricity supplied to the State grid by the project activity is 32.116 GWh and the net emission reductions are of 27,449 tCO₂e for the present monitoring period. There no is Diesel consumption for this project.

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 Nagavali River is established in a rural area. Majority of population in this area depend on cultivation and cattle 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 33 KV substation at Naguru Village, thus energy availability and quality of power improves significantly under the service area of the substation.

Economic Well-Being:

Project proponent had mobilised investment in the region to an extent of about Rs. 92.94 millions which otherwise would not have happened in the absence of the project activity. This is a significant investment in the project 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 Andhra 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.

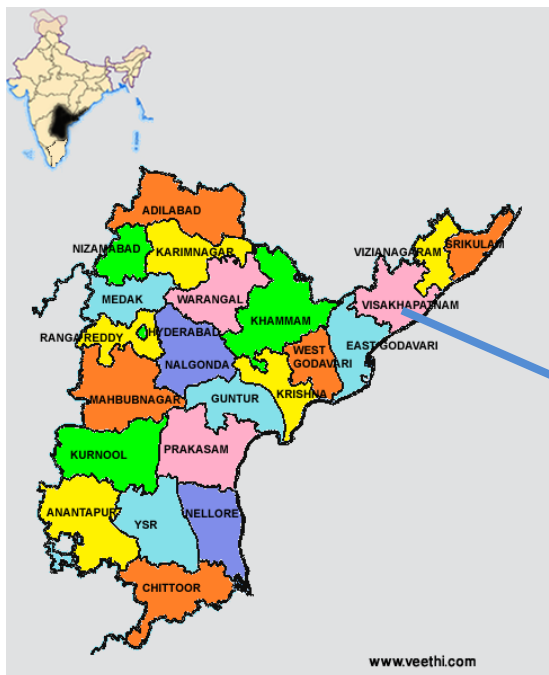
A.2. Location of project activity

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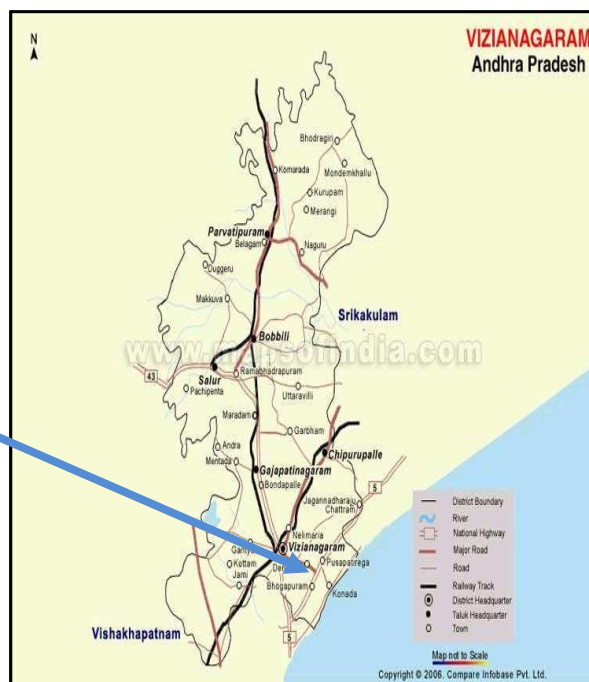
The location of project activity is:

Village	:	Naguru
Taluk	:	Grugubilli
District	:	Vizianagaram
State	:	Andhra Pradesh
Country	:	India.

The geographical co-ordinates of the location are 83° -31' -32" E (longitude) and 18° -44' -20" N (latitude). Physical location of the project is marked in the maps below:



Location of Andhra Pradesh state in India



Location of 1.725 MW Naguru in Vizainagaram 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: Sardar Power 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 13**, AMS-I.D, Scope: 01.

A.5. Crediting period type and duration

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03/06/2009 to 02/06/2019 (Fixed)

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

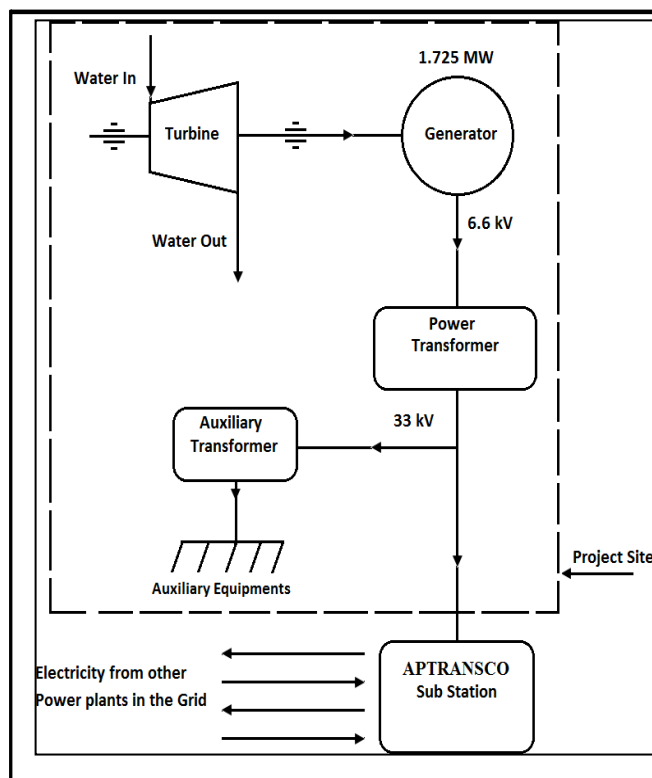
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The technology or power generation process using hydro resources is converting the potential energy available in the water flows into mechanical energy using hydro turbines and then to electrical energy using alternators. The generated power will be 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	
<u>Turbine:</u> Make : B Fouress Pvt. Ltd. Type : Vertical full Kaplan. <u>DG Set</u> Make : Kirloskar Capacity : 40 KVA, Frequency : 50 Hz Volts : 440V, Power Factor : 0.8 Tank Capacity : 230 Litres approx.	<u>Generator:</u> Make : WEG Model : SSA710 Sl. No : 138635 Capacity : 1.725MW, Power factor : 0.8 Voltage : 6.6 kV, Rated speed : 750 RPM, Frequency : 50 HZ

Detailed technical process diagram of the project activity is furnished below:



The project activity has been commissioned on 17/07/2008 and registered with CDM EB on 03/06/2009. The project promoter has installed all monitoring equipment's to monitor the parameters, which are described in the registered CDM-PDD.

The plant has been operated effectively 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

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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

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There is no correction during the current monitoring period.

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

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There is no changes to start date of crediting period during the current monitoring period

B.2.4. Inclusion of monitoring plan

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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

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There is 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

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NA

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

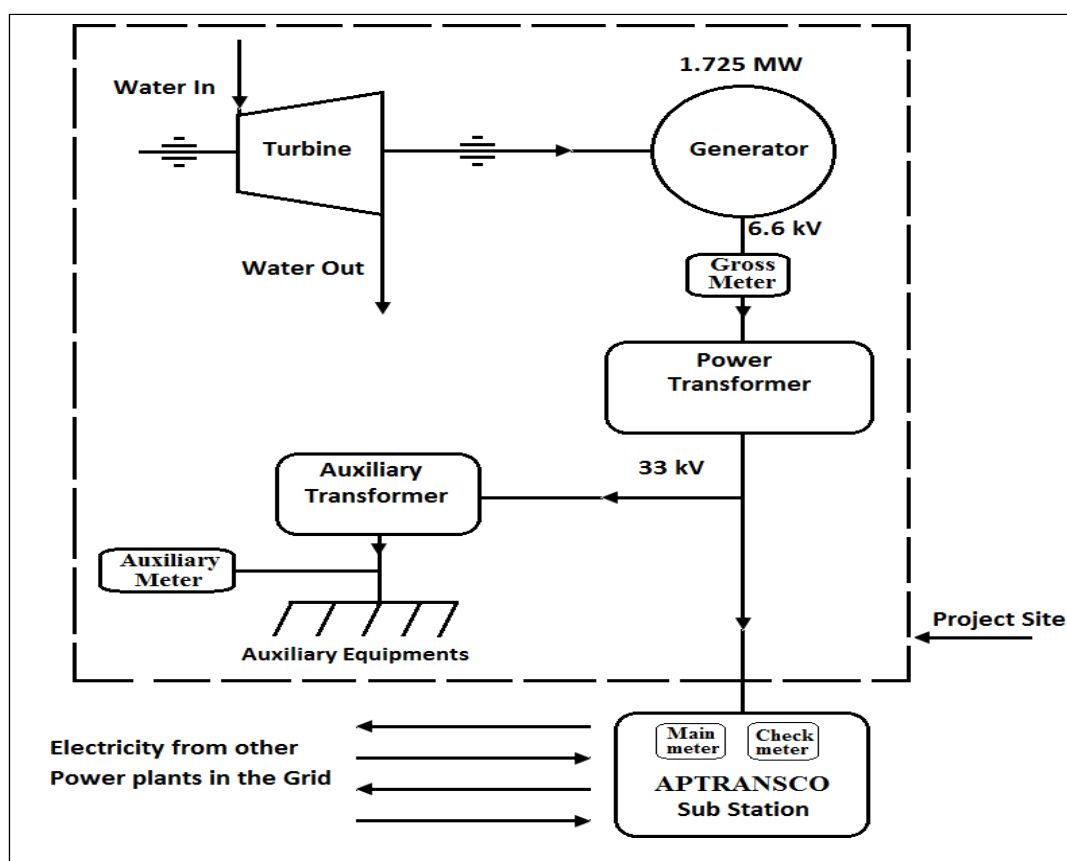
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NA

SECTION C. Description of monitoring system

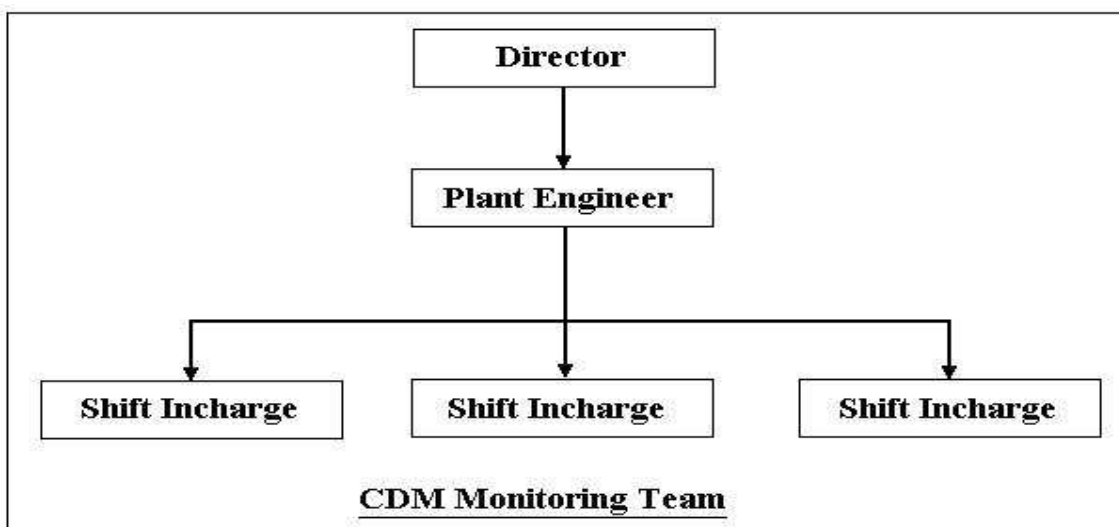
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The project had been provided the monitoring equipments which were described in the registered CDM-PDD and the line diagram for the monitoring parameters are furnished below:



CDM Monitoring Team

A CDM team has been formed in Sardar Power Limited (SPL) for monitoring and verification of all the monitoring parameters as per the guidelines formulated by the management of SPL. Qualified and trained people monitor the parameters and emission reduction calculations. SPL 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 have 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 experienced persons (mechanical and electrical) in various disciplines to assist him. He is responsible for review the monthly reports submitted by Plant Manager and prepare a report on operational conditions of plant and 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

Plant Engineer

The Plant Engineer will examine the reports generated by the Shift Incharge with respect to the monthly electricity generation, export, import and annual emission reduction calculations as per the monitoring plan. The calibration of the meters installed will be taken care by him as per the monitoring plan.

Shift Incharge

Shift Incharge is responsible for recording the total electricity generation, auxiliary consumption, electricity export, import, plant shut down times, etc. The monthly reports will be generated and submitted to the Plant Engineer for verification and emission reduction calculations.

Calibration

Main meter and Check meter are being tested and certified at least once in a year against an accepted laboratory standard meter in accordance with electricity standards. The calibration of the meters is carried out by ETDC. The meters are deemed to be working satisfactorily if the errors are within the meter specifications of 0.2s accuracy class.

SECTION D. Data and parameters**D.1. Data and parameters fixed ex ante***(Copy this table for each data or parameter).*

Data/Parameter	EF _y
Unit	tCO ₂ /GWh
Description	CO ₂ emission factor for the regional grid system
Source of data	CEA Published grid emission factor
Value(s) applied	854.69
Choice of data or measurement methods and procedures	Central Electricity Authority (CEA) values have been used for authenticity of the data, available publicly by Govt. of India with a view to obtain uniformity of approach in the country towards a common objective.
Purpose of data/parameter	Baseline emission calculations
Additional comment:	--

Data/Parameter	COEF _i
Unit	kgCO ₂ /TJ
Description	CO ₂ emission coefficient of fuel type i
Source of data	IPCC 2006 default values
Value(s) applied	74,000
Choice of data or measurement methods and procedures	IPCC values have been used for diesel since no country specific data is available
Purpose of data/parameter	Project emission calculations
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

Data/Parameter	EG _{Gross,y}
Unit	GWh
Description	Total electricity generated by the project activity during the year y.
Measured /Calculated /Default	On-site measurement
Source of data	Daily generation log sheets
Value(s) of monitored Parameter	32.632 Please see Annex-1 for monthly values
Monitoring equipment	Serial No. : 6900TM0807 (Gross meter changed on 20-01-2011) Model No. : TM 7400 Accuracy class : 1.0 Calibration Frequency : Annually Date of Calibrations : 10/05/2019
Measuring/ Reading/ Recording frequency	Recording daily.

Calculation method (if applicable):	-----
QA/QC procedures	The energy generated is measured using calibrated meters and recorded by project proponent. Meter is recalibrated periodically at reputed third party lab.
Purpose of data/parameter	To monitor the plant's generation
Additional comments	--

Data/Parameter	EGAux,y
Unit	GWh
Description:	Auxiliary electricity consumption of the project
Measured /Calculated /Default:	On-site measurement
Source of data:	Daily generation log sheets
Value(s) of monitored parameter:	0.425 Please see Annex-1 for monthly values
Monitoring equipment	Serial No. : 6901TM0807 Model No. : TM 7400 Accuracy class : 1.0 Calibration Frequency : Annually Date of Calibrations : 10/05/2019
Measuring/ Reading/ Recording frequency:	Recording daily.
Calculation method (if applicable):	-----
QA/QC procedures applied:	Meters are recalibrated periodically at reputed third party lab.
Purpose of data/parameter	To monitor the plant's Auxiliary consumption
Additional comments	

Data/Parameter	EG _y
Unit:	GWh
Description:	Net electricity supplied to the grid by the project
Measured /Calculated /Default:	On-site measurements
Source of data:	Monthly Joint Meter Reading Reports certified by APEPDCL officials
Value(s) of monitored parameter:	32.116 Please see Annex-1 for monthly values
Monitoring equipment	Main Meter Serial No. : 07659670 Model No. : A1860RALNC Make : ELSTER Accuracy class : 0.2S Calibration Frequency : Annually Date of Calibrations : 10/05/2019
Measuring/ Reading/ Recording frequency:	Recording Monthly
Calculation method (if applicable):	-----

QA/QC procedures applied:	Meters will be calibrated as per industry standards. Sales records to the grid and other records are used to ensure consistency.
Purpose of data/parameter	Calculating Baseline emissions
Additional comments	-

Data/Parameter	EG import ,y
Unit	GWh
Description	Grid electricity import to the project activity during the year y
Measured /Calculated /Default:	On-site measurements
Source of data:	Monthly Joint Meter Readings Reports certified by APEPDCL officials
Value(s) of monitored parameter:	0.083 Please see Annex-1 for monthly values
Monitoring equipment	Main Meter Serial No. : 07659670 Model No. : A1860RALNC Make : ELSTER Accuracy class : 0.2S Calibration Frequency : Annual Date of Calibrations : 10/05/2019
Measuring/ Reading/ Recording frequency:	Recording Monthly
Calculation method (if applicable):	-----
QA/QC procedures applied:	Meters will be calibrated as per industry standards. Sales records to the grid and other records are used to ensure consistency.
Purpose of data/parameter	Calculating Baseline emissions
Additional comments	-

Data/Parameter	F i,y
Unit	Tonnes/ kilo 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:	0
Monitoring equipment	
Measuring/ Reading/ Recording frequency:	Recorded monthly.
Calculation method (if applicable):	---
QA/QC procedures applied:	The data recorded can be cross checked against the fuel purchase receipts.
Purpose of data/parameter	Calculating Project emissions
Additional comments	-

Table 1: Main / Check meters, Gross Energy meter & Auxiliary meter Recalibration Test Details

S.No	Serial No.	Date of calibration	Validity
Main Meter-07659670			
1	34121227191	25/05/2011	24/05/2012
2		23/05/2012	22/05/2013
3	34121227191	22/05/2013	21/05/2014
4		20/05/2014	19/05/2015
5		17/05/2015	16/05/2016
6		15/05/2016	15/05/2017
7		12/05/2017	11/05/2018
8		11/05/2018	10/05/2019
9		10/05/2019	09/05/2020

Check Meter-07659673

S.No	Serial No.	Date of calibration	Validity
1	34121227191	25/05/2011	24/05/2012
2		23/05/2012	22/05/2013
3	34121227191	22/05/2013	21/05/2014
4		20/05/2014	19/05/2015
5		17/05/2015	16/05/2016
6		15/05/2016	15/05/2017
7		12/05/2017	11/05/2018
8		11/05/2018	10/05/2019
9		10/05/2019	09/05/2020

Gross Meter-6900TM0807

S.No	Serial No.	Date of calibration	Validity
1	34121227191	25/05/2011	24/05/2012
2		23/05/2012	22/05/2013
3	34121227191	22/05/2013	21/05/2014
4		20/05/2014	19/05/2015
5		17/05/2015	16/05/2016
6		15/05/2016	15/05/2017
7		12/05/2017	11/05/2018
8		11/05/2018	10/05/2019
9		10/05/2019	09/05/2020

Auxiliary Meter-6901TM0807

S.No	Serial No.	Date of calibration	Validity
1	34121227191	25/05/2011	24/05/2012
2		23/05/2012	22/05/2013
3	34121227191	22/05/2013	21/05/2014
4		20/05/2014	19/05/2015
5		17/05/2015	16/05/2016
6		15/05/2016	15/05/2017
7		12/05/2017	11/05/2018
8		11/05/2018	10/05/2019
9		10/05/2019	09/05/2020

D.3. Implementation of sampling plan

>>NA

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

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The baseline emissions are calculated as follows:

$$BE_y = EG_y * EF_y$$

Where

EG_y is the net electricity export to grid in a given year (GWh)[EG_y = EG_{Export} – EG_{Import}]EF_y is the emission factor for a given year (tCO₂/GWh)**E.2. Calculation of project emissions or actual net removals**

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

as:

$$PE_{\text{diesel},y} = F_{d,y} * \text{Density} * \text{NCV} * EF_{\text{CO}_2} * \text{OXID} / 10^6$$

Where,

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

The density of diesel (0.845 kg/Ltr. as per Indian Oil Corporation Ltd

NCV : The calorific value of diesel (43.3 TJ/Gg as per IPCC 2006 default value)

EF_{CO₂} : 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

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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 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
Total	27449	0	--	4,597	22,852	--	27,449

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 ₂ e)	Amount estimated ex ante for this monitoring period in the PDD (t CO ₂ e)
27,449	41,396

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

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Considering the annual average emission reductions as per the registered PDD which is 5,559 tCO₂e per year, the number of days during the current monitoring period is to be 2718 days. The amount estimated is 41,396 tCO₂e.

E.6. Remarks on increase in achieved emission reductions

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During the present reporting period the project activity has achieved 33.69% 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:

- More number of grids failures, due to which the plant was forced to shut down most of the time.
- More rainfalls in the project region, the project activity was forced to shut down due to slit accumulation in the penstock even after a moderate rainfall in the catchment area.

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

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

Consolidated report of monitoring parameters

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumpti on, [EG _{Auxiliary,y}]	Electricit y Exported to Grid [EG _{export,y}]	Electricit y Importe d from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consu mptio n [F _{i,y}]	Baseline Emissio n Factor [EF _y]	Baselin e Emissi on [BE _y]	Project Emissi on [PE _y]	Net Emissio n Reducti on [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GW h	tCO ₂ e	tCO ₂ e	tCO ₂ e
1	24-12-2011 to 23-01-2012	572940.00	8460	564480	10	564,470	0.56447	0	854.69	482.45	0.00	482.45
2	24-01-2012 to 23-02-2012	209370.00	3250	206120	3700	202,420	0.20242	0	854.69	173.01	0.00	173.01
3	24-02-2012 to 23-03-2012	0.00	0	0	610	-610	-0.00061	0	854.69	-0.52	0.00	-0.52
4	24-03-2012 to 23-04-2012	0.00	0	0	7850	-7,850	-0.00785	0	854.69	-6.71	0.00	-6.71
5	24-04-2012 to 23-05-2012	80.00	0	80	580	-500	-0.00050	0	854.69	-0.43	0.00	-0.43
6	24-05-2012 to 23-06-2012	18840.00	660	18180	410	17,770	0.01777	0	854.69	15.19	0.00	15.19
7	24-06-2012 to 23-07-2012	636620.00	9720	626900	230	626,670	0.62667	0	854.69	535.61	0.00	535.61
8	24-07-2012 to 23-08-2012	625570.00	8490	617080	480	616,600	0.61660	0	854.69	527.00	0.00	527.00
9	24-08-2012 to 23-09-2012	1055480.00	16740	1038740	160	1,038,580	1.03858	0	854.69	887.66	0.00	887.66
10	24-09-2012 to 23-10-2012	707180.00	9410	697770	560	697,210	0.69721	0	854.69	595.90	0.00	595.90
11	24-10-2012 to 23-11-2012	745290.00	11020	734270	370	733,900	0.73390	0	854.69	627.26	0.00	627.26
12	24-11-2012 to 23-12-2012	902410.00	12320	890090	210	889,880	0.88988	0	854.69	760.57	0.00	760.57

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumption, [EG _{Auxiliary,y}]	Electricity Exported to Grid [EG _{export,y}]	Electricity Imported from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consumption [F _{i,y}]	Baseline Emission Factor [EF _y]	Baseline Emission [BE _y]	Project Emission [PE _y]	Net Emission Reduction [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
13	24-12-2012 to 23-01-2013	40028.00	0	40028	330	39,698	0.03970	0	854.69	33.93	0.00	33.93
14	24-01-2013 to 23-02-2013	51339.00	749	50590	720	49,870	0.04987	0	854.69	42.62	0.00	42.62
15	24-02-2013 to 23-03-2013	0.00	0	0	6440	-6,440	-0.00644	0	854.69	-5.50	0.00	-5.50
16	24-03-2013 to 23-04-2013	0.00	0	0	560	-560	-0.00056	0	854.69	-0.48	0.00	-0.48
17	24-04-2013 to 23-05-2013	0.00	0	0	780	-780	-0.00078	0	854.69	-0.67	0.00	-0.67
18	24-05-2013 to 23-06-2013	179081.00	3171	175910	890	175,020	0.17502	0	854.69	149.59	0.00	149.59
19	24-06-2013 to 23-07-2013	632450.00	9130	623320	480	622,840	0.62284	0	854.69	532.34	0.00	532.34
20	24-07-2013 to 23-08-2013	732780.00	11410	721370	220	721,150	0.72115	0	854.69	616.36	0.00	616.36
21	24-08-2013 to 23-09-2013	814790.00	12180	802610	220	802,390	0.80239	0	854.69	685.79	0.00	685.79
22	24-09-2013 to 23-10-2013	806480.00	10870	795610	180	795,430	0.79543	0	854.69	679.85	0.00	679.85
23	24-10-2013 to 23-11-2013	572310.00	7080	565230	230	565,000	0.56500	0	854.69	482.90	0.00	482.90
24	24-11-2013 to 23-12-2013	658390.00	8200	650190	190	650,000	0.65000	0	854.69	555.55	0.00	555.55
25	24-12-2013 to 23-01-2014	660280.00	8730	651550	20	651,530	0.65153	0	854.69	556.86	0.00	556.86
26	24-01-2014 to 23-02-2014	373390.00	4900	368490	5150	363,340	0.36334	0	854.69	310.54	0.00	310.54
27	24-02-2014 to 23-03-2014	144900.00	1880	143020	440	142,580	0.14258	0	854.69	121.86	0.00	121.86

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumption, [EG _{Auxiliary,y}]	Electricity Exported to Grid [EG _{export,y}]	Electricity Imported from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consumption [F _{i,y}]	Baseline Emission Factor [EF _y]	Baseline Emission [BE _y]	Project Emission [PE _y]	Net Emission Reduction [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
28	24-03-2014 to 23-04-2014	47300.00	680	46620	700	45,920	0.04592	0	854.69	39.25	0.00	39.25
29	24-04-2014 to 23-05-2014	122780.00	1780	121000	770	120,230	0.12023	0	854.69	102.76	0.00	102.76
30	24-05-2014 to 23-06-2014	71620.00	1110	70510	1080	69,430	0.06943	0	854.69	59.34	0.00	59.34
31	24-06-2014 to 23-07-2014	111530.00	1600	109930	560	109,370	0.10937	0	854.69	93.48	0.00	93.48
32	24-07-2014 to 23-08-2014	593200.00	3620	589580	200	589,380	0.58938	0	854.69	503.74	0.00	503.74
33	24-08-2014 to 23-09-2014	450130.00	6530	443600	390	443,210	0.44321	0	854.69	378.81	0.00	378.81
34	24-09-2014 to 23-10-2014	688030.00	9620	678410	100	678,310	0.67831	0	854.69	579.74	0.00	579.74
35	24-10-2014 to 23-11-2014	1030850.00	14720	1016130	220	1,015,910	1.01591	0	854.69	868.29	0.00	868.29
36	24-11-2014 to 23-12-2014	719050.00	0	719050	4650	714,400	0.71440	0	854.69	610.59	0.00	610.59
37	24-12-2014 to 23-01-2015	670127.00	8507	661620	160	661,460	0.66146	0	854.69	565.34	0.00	565.34
38	24-01-2015 to 23-02-2015	332886.00	3896	328990	400	328,590	0.32859	0	854.69	280.84	0.00	280.84
39	24-02-2015 to 23-03-2015	85530.00	1400	84130	480	83,650	0.08365	0	854.69	71.49	0.00	71.49
40	24-03-2015 to 23-04-2015	0.00	0	0	1500	-1,500	-0.00150	0	854.69	-1.28	0.00	-1.28
41	24-04-2015 to 23-05-2015	0.00	0	0	1640	-1,640	-0.00164	0	854.69	-1.40	0.00	-1.40
42	24-05-2015 to 23-06-2015	88620.00	1350	87270	880	86,390	0.08639	0	854.69	73.84	0.00	73.84

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumption, [EG _{Auxiliary,y}]	Electricity Exported to Grid [EG _{export,y}]	Electricity Imported from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consumption [F _{i,y}]	Baseline Emission Factor [EF _y]	Baseline Emission [BE _y]	Project Emission [PE _y]	Net Emission Reduction [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
43	24-06-2015 to 23-07-2015	0.00	0	0	1020	-1,020	-0.00102	0	854.69	-0.87	0.00	-0.87
44	24-07-2015 to 23-08-2015	0.00	0	0	890	-890	-0.00089	0	854.69	-0.76	0.00	-0.76
45	24-08-2015 to 23-09-2015	612590.00	8390	604200	420	603,780	0.60378	0	854.69	516.04	0.00	516.04
46	24-09-2015 to 23-10-2015	494450.00	7160	487290	260	487,030	0.48703	0	854.69	416.26	0.00	416.26
47	24-10-2015 to 23-11-2015	158130.00	2450	155680	650	155,030	0.15503	0	854.69	132.50	0.00	132.50
48	24-11-2015 to 23-12-2015	176740.00	2850	173890	660	173,230	0.17323	0	854.69	148.06	0.00	148.06
49	24-12-2015 to 23-01-2016	196100.00	2560	193540	750	192,790	0.19279	0	854.69	164.78	0.00	164.78
50	24-01-2016 to 23-02-2016	79860.00	1160	78700	760	77,940	0.07794	0	854.69	66.61	0.00	66.61
51	24-02-2016 to 23-03-2016	0.00	0	0	1130	-1,130	-0.00113	0	854.69	-0.97	0.00	-0.97
52	24-03-2016 to 23-04-2016	0.00	0	0	740	-740	-0.00074	0	854.69	-0.63	0.00	-0.63
53	24-04-2016 to 23-05-2016	0.00	0	0	900	-900	-0.00090	0	854.69	-0.77	0.00	-0.77
54	24-05-2016 to 23-06-2016	0.00	0	0	740	-740	-0.00074	0	854.69	-0.63	0.00	-0.63
55	24-06-2016 to 23-07-2016	725450.00	8920	716530	270	716,260	0.71626	0	854.69	612.18	0.00	612.18
56	24-07-2016 to 23-08-2016	794510.00	11460	783050	350	782,700	0.78270	0	854.69	668.97	0.00	668.97
57	24-08-2016 to 23-09-2016	1028250.00	14250	1014000	120	1,013,880	1.01388	0	854.69	866.55	0.00	866.55

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumption, [EG _{Auxiliary,y}]	Electricity Exported to Grid [EG _{export,y}]	Electricity Imported from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consumption [F _{i,y}]	Baseline Emission Factor [EF _y]	Baseline Emission [BE _y]	Project Emission [PE _y]	Net Emission Reduction [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
58	24-09-2016 to 23-10-2016	885190.00	11940	873250	200	873,050	0.87305	0	854.69	746.19	0.00	746.19
59	24-10-2016 to 23-11-2016	383190.00	4440	378750	560	378,190	0.37819	0	854.69	323.24	0.00	323.24
60	24-11-2016 to 23-12-2016	365290.00	5570	359720	470	359,250	0.35925	0	854.69	307.05	0.00	307.05
61	24-12-2016 to 23-01-2017	262400.00	3480	258920	680	258,240	0.25824	0	854.69	220.72	0.00	220.72
62	24-01-2017 to 23-02-2017	20840.00	300	20540	930	19,610	0.01961	0	854.69	16.76	0.00	16.76
63	24-02-2017 to 23-03-2017	0.00	0	0	840	-840	-0.00084	0	854.69	-0.72	0.00	-0.72
64	24-03-2017 to 23-04-2017	0.00	0	0	760	-760	-0.00076	0	854.69	-0.65	0.00	-0.65
65	24-04-2017 to 23-05-2017	0.00	0	0	1080	-1,080	-0.00108	0	854.69	-0.92	0.00	-0.92
66	24-05-2017 to 23-06-2017	353640.00	3840	349800	690	349,110	0.34911	0	854.69	298.38	0.00	298.38
67	24-06-2017 to 23-07-2017	350600.00	6080	344520	630	343,890	0.34389	0	854.69	293.92	0.00	293.92
68	24-07-2017 to 23-08-2017	133270.00	780	132490	1100	131,390	0.13139	0	854.69	112.30	0.00	112.30
69	24-08-2017 to 23-09-2017	919030.00	13450	905580	370	905,210	0.90521	0	854.69	773.67	0.00	773.67
70	24-09-2017 to 23-10-2017	729950.00	0	729950	110	729,840	0.72984	0	854.69	623.79	0.00	623.79
71	24-10-2017 to 23-11-2017	714230.00	9710	704520	470	704,050	0.70405	0	854.69	601.74	0.00	601.74
72	24-11-2017 to 23-12-2017	886840.00	12670	874170	140	874,030	0.87403	0	854.69	747.02	0.00	747.02

S.N o.	Monitoring Period	Gross Electricity Generation, kWh [EG _{gross,y}]	Auxiliary consumption, [EG _{Auxiliary,y}]	Electricity Exported to Grid [EG _{export,y}]	Electricity Imported from Grid [EG _{import,y}]	Net Electricity Exported [EG _y] without application of correction factor due to delay in calibration		Diesel Consumption [F _{i,y}]	Baseline Emission Factor [EF _y]	Baseline Emission [BE _y]	Project Emission [PE _y]	Net Emission Reduction [ER _y]
		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
73	24-12-2017 to 23-01-2018	415190.00	3560	411630	8520	403,110	0.40311	0	854.69	344.53	0.00	344.53
74	24-01-2018 to 23-02-2018	131410.00	1570	129840	710	129,130	0.12913	0	854.69	110.37	0.00	110.37
75	24-02-2018 to 23-03-2018	0.00	0	0	730	-730	-0.00073	0	854.69	-0.62	0.00	-0.62
76	24-03-2018 to 23-04-2018	0.00	0	0	240	-240	-0.00024	0	854.69	-0.21	0.00	-0.21
77	24-04-2018 to 23-05-2018	0.00	0	0	840	-840	-0.00084	0	854.69	-0.72	0.00	-0.72
78	24-05-2018 to 23-06-2018	258440.00	3510	254930	800	254,130	0.25413	0	854.69	217.20	0.00	217.20
79	24-06-2018 to 23-07-2018	316030.00	4100	311930	850	311,080	0.31108	0	854.69	265.88	0.00	265.88
80	24-07-2018 to 23-08-2018	801320.00	11240	790080	520	789,560	0.78956	0	854.69	674.83	0.00	674.83
81	24-08-2018 to 23-09-2018	938040.00	12130	925910	330	925,580	0.92558	0	854.69	791.08	0.00	791.08
82	24-09-2018 to 23-10-2018	909950.00	12580	897370	170	897,200	0.89720	0	854.69	766.83	0.00	766.83
83	24-10-2018 to 23-11-2018	181400.00	2150	179250	860	178,390	0.17839	0	854.69	152.47	0.00	152.47
84	24-11-2018 to 23-12-2018	542710.00	7240	535470	540	534,930	0.53493	0	854.69	457.20	0.00	457.20
85	24-12-2018 to 23-01-2019	711790.00	9210	702580	100	702,480	0.70248	0	854.69	600.40	0.00	600.40
86	24-01-2019 to 23-02-2019	425580.00	5430	420150	500	419,650	0.41965	0	854.69	358.67	0.00	358.67
87	24-02-2019 to 23-03-2019	298410.00	4340	294070	380	293,690	0.29369	0	854.69	251.01	0.00	251.01

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		kWh	kWh	kWh	kWh	kWh	GWh	Ltrs.	tCO ₂ /GWh	tCO ₂ e	tCO ₂ e	tCO ₂ e
88	24-03-2019 to 23-04-2019	197080.00	2750	194330	710	193,620	0.19362	0	854.69	165.49	0.00	165.49
89	24-04-2019 to 23-05-2019	55000.00	740	54260	1100	53,160	0.05316	0	854.69	45.44	0.00	45.44
90	24-05-2019 to 02-06-2019	27530.00	234	19180	328	18,852	0.01885	0	854.69	16.11	0.00	16.11
Total		32,632,081	425427	32198538	82668	32115870	32	0		27449	0	27449

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
09.0	8 October 2021	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 03.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN).
08.0	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).
07.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period; • Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods; • Make editorial improvements.
06.0	7 June 2017	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 01.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.

<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		