18 MW KEMPHOLE MINI HYDEL SCHEME (KMHS), BY INTERNATIONAL POWER CORPORATION LIMITED, INDIA

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Version	02
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Project ID	PL1893 (in pipeline)
Monitoring Period	01-December-2014 to 19-October-2017 (both dates included)
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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

Summary:

Kemphole Mini Hydel Scheme (KMHS) is an 18 MW (3 X 6 MW) Run-of-the-River hydro power project located at Kemphole stream in Hassan district of Karnataka in India. The main activity of the project is generation of electricity using hydro potential available in Kemphole stream and exporting the generated power to Karnataka Power Transmission Corporation Ltd. (KPTCL) as per power purchase agreement between two of them. The Run-of-the-River hydro power project located at Kemphole stream in Heggadde village, Sakaleshpura taluk of Hassan district of Karnataka in India.

Relevant dates

KMHS project was completed in two stages; in first stage 2X6 MW units were installed (20th Oct 2003, 20th Nov 2003), in second stage 6 MW was installed (10th Jan 2005). The project activity utilises the water flow and fall available in the Kemphole stream. The project location is situated in dense forests of the Kemphole reserve forest and there is no habitation in the nearby area. The project does not involve any displacement of local population and associated rehabilitations. The project uses horizontal Francis turbines for power generation.

The project is registered under CDM (Ref no. 0312) on 25-May-2006 with the following crediting period:

1st crediting period: 20-October-2003 to 19-October-2010

2nd Crediting period: 20-October-2010 to 19-October-2017

The CERs are issued up to 30-November-2014 and from 01-December-2014 onwards the emission reduction will be claimed under VCS.

Emission reduction:

This is the first monitoring period (01-December-2014 to 19-October-2017) in VCS. And the actual emission reduction achieved in this monitoring period is 108,170 tCO_2e.

1.2 Sectoral Scope and Project Type

The project activity involves grid connected clean electricity generation by utilizing hydro energy in the state of Karnataka, India. The project total installed capacity is 18 MW (3 x 6 MW). The project is not a grouped project.

IPCL supply electricity to the state grid Karnataka Power Transmission Corporation Ltd. (KPTCL) - which is part of Southern Grid of India through a power purchase agreement. Currently the Southern Grid and NEWNE Grid are merged and hence the project is now connected to the Indian National Grid.

Methodology: ACM0002 “Grid-connected electricity generation from renewable sources” (Version 12.0)

Sectoral Scope: 1 – Energy industries (renewable - / non-renewable sources)

1.3 Project Proponent

Organization name	International Power Corporation Private Limited
Contact person	B P Ramesh
Title	Director
Address	#19, 3rd floor, Shivashankar Plaza, Lalbagh road Bangalore, Karnataka- 560 027 India
Telephone	+91 80 22100052
Email	bpr@internationalpower.in

1.4 Other Entities Involved in the Project

Organization name	Kosher Climate India Private Limited
Role in the project	Project Consultant
Contact person	Vamsi Krishna M
Title	General Manager
Address	First Floor, #945, 21st cross, 5th main Sector- 7, HSR Layout, Bangalore, Karnataka- 560 102 India
Telephone	+91 80 25720814
Email	vamsi@kosherclimate.com

1.5 Project Start Date

20-October-2003 (date of commissioning of first unit)

1.6 Project Crediting Period

Start date of crediting period: 01-December-2014

End date of crediting period: 19-October-2024

Length of crediting period: 9 years, 10 months, 19 days

Note: The current VCS monitoring period (01/12/2014 to 19/10/2017) lies within the CDM 2nd Crediting period *(*20/10/2010 to 19/10/2017) which is in line with the requirements of para 3.8.3 of VCS Standard, version 3.7.

1.7 Project Location

Village: Heggadde

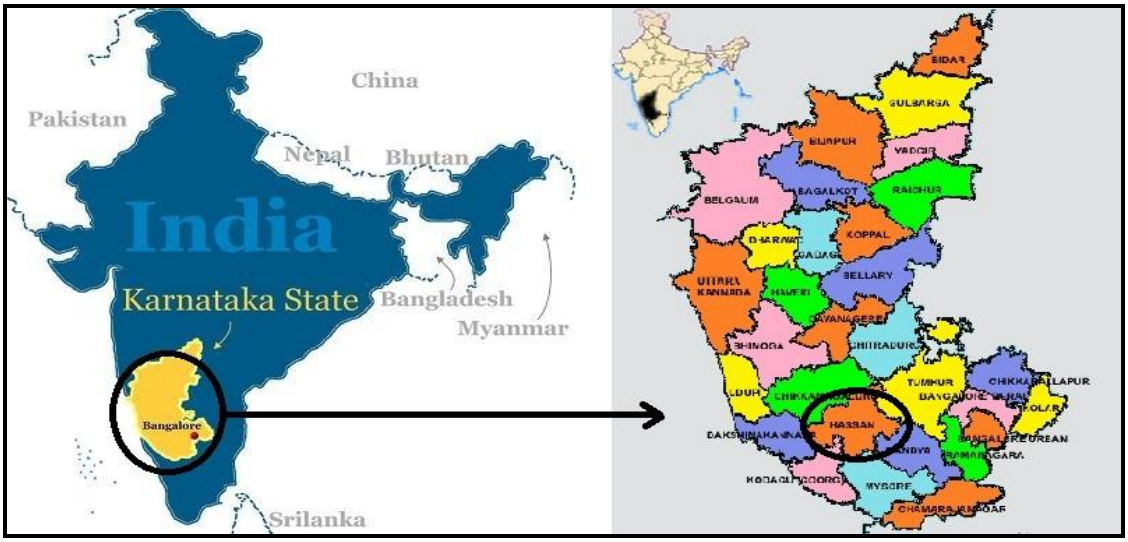
Taluk: Sakaleshpura

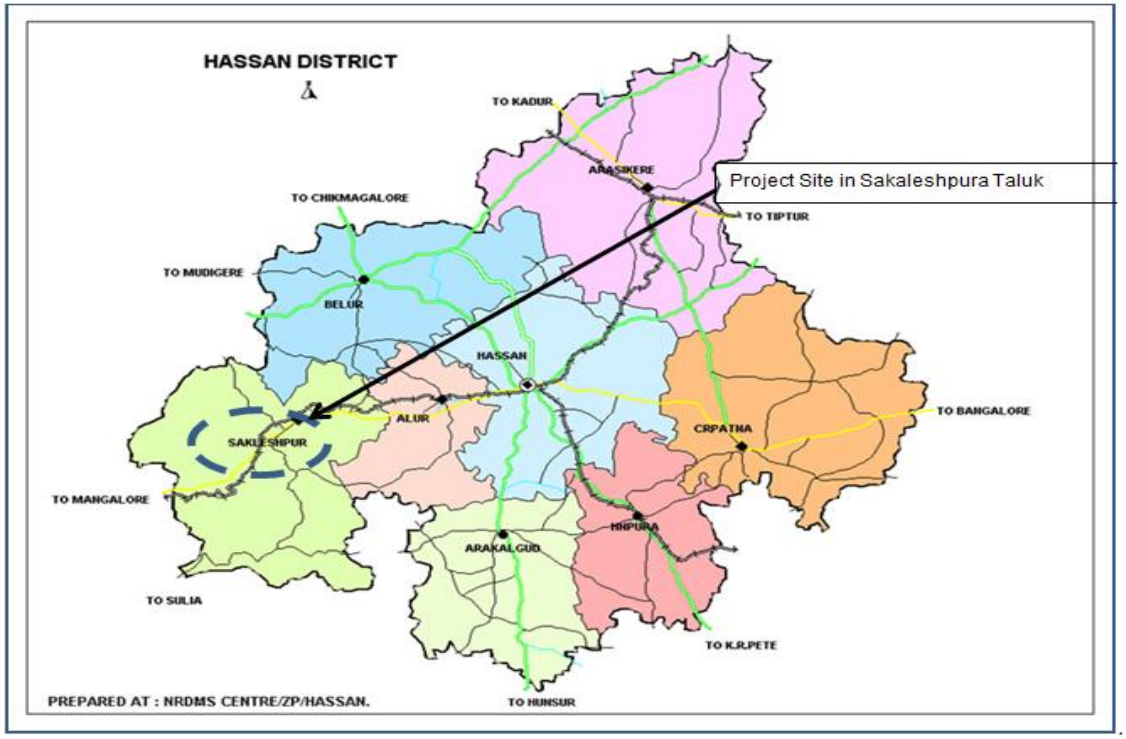
District: Hassan

State: Karnataka

Geographical coordinates of weir site of KMHS project activity is Latitude 12°50'30"N and Longitude 75°40'30"E and of the power house is Latitude 12°50'17.98 "N and Longitude 75°40'11.88"E

Location of project activity is follows:





1.8 Title and Reference of Methodology

Title of the approved baseline and monitoring methodology: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources".

Reference: ACM0002, Version12 (EB 52),
Sectoral Scope: 1

1.9 Other Programs

Project is registered under Clean Development Mechanism (CDM) with UNFCCC on 25-May-2006. Project reference number is 0312[1]

The project CDM 1st crediting period is from 20-October-2003 to 19-October-2010 and the 2nd crediting period is from 20-October-2010 to 19-October-2017. The CERs are issued up to 30-November- 2014.

In VCS, the issuance is requested only from 01-December-2014 and PP will not claim CERs from 01-December-2014. Hence there is no double counting of carbon credits.

1.10 Sustainable Development

Environmental wellbeing: In India coal is the primary source of energy for power generation and production processes. The demand for electrical energy has been steadily increasing. Expansion

[1] https://cdm.unfccc.int/Projects/projsearch.html

of the electrical supply to new areas and rapid industrialization are the main reasons for the growth in demand for power. The project activity contributes to the welfare of environment at large considering the carbon emissions that would have been generated by a thermal plant of equal capacity. The project hence decreases the future needs for coal based power generation by the grid and thereby reducing the CO_2 emissions from the electricity sector. Associated SPM, SOx, NOx emissions and emissions related to transportation and excavation of fossil fuel are also avoided.

Since the project is a Run-of-the-River project and there are no major irrigation works across the stream and has no pondage of water, there are no negative environmental impacts.

Social Wellbeing: Karnataka is witnessing major shortage of power. On an average there was a shortage of supply over demand by 15 per cent during 1994-2000. The project activity is augmenting grid supply that is necessary for the sustenance and development of the society.

Economic Wellbeing: The project activity provides a fillip to economic activity in the region. Direct & Indirect Employment has been generated in the plant for the project implementation & management.

Technological Wellbeing: The project uses well established horizontal Francis turbines for power generation. The project activity is the first hydel power project in the Netravathi river basin. The success of the project activity has catalysed more hydel power projects to come in the basin/region. Therefore the project is contributing to the sustainable development in following manner.

- Generating 51.08 million units of electricity on an annual basis
- Reducing electricity consumption required for auxiliary consumption to generate equivalent amount of electricity in thermal power plants
- Conservation of natural resources like coal/gas/oil, this makes natural resources available for other important applications
- Reducing GHG emissions
- Reducing pollution of other kind (like SOx, NOx) which happen in thermal power plants

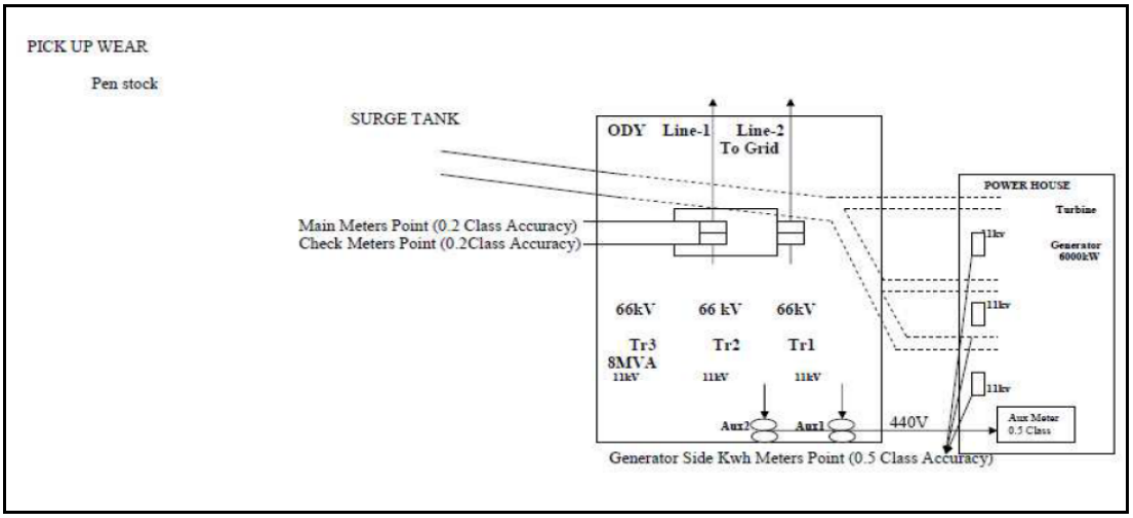
2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

The project was completed in two stages; in first stage 2X6 MW units were installed (20th Oct 2003, 20th Nov 2003), in second stage 6 MW was installed (10th Jan 2005).

A gated weir across Kemphole, downstream of confluence of Kadumanehole with Kemphole is constructed. The river bed level at the gated weir site is 319 m and the full reservoir level of the weir is 340 m. Three horizontal Francis turbines of 6 MW capacity each coupled with horizontal 3 phase, 50 Hz, 500 rpm synchronous generators are used. The gross head available for the project is 68 meter. A 66 KV double circuit transmission line (total 124 towers over 29 KMs) from the switchyard to the 11/66 KV sub-station at Sakaleshpura is used for power evacuation from the project activity.

Line diagram



During the monitoring period) the project activity was operated and monitored in accordance with the applicable baseline and monitoring methodology ACM0002, Version 12 and registered PDD.

All the three units were in operation and no abnormal circumstance occurred during this monitoring period. All the events are recorded in the log book available at the project site. As a part of regular maintenance the machines are stopped for mechanical and electrical maintenance.

2.2 Deviations

2.2.1 Methodology Deviations

No methodology deviation is applied during this monitoring period.

2.2.2 Project Description Deviations

No project description deviations applied during this monitoring period.

2.3 Grouped Project

The project is not a grouped project..

2.4 Safeguards

2.4.1 No Net Harm

Please refer to the Section D of the registered CDM PDD, wherein the details regarding the Environmental Impact has been detailed out.

Web-link: https://cdm.unfccc.int/Projects/DB/SGS-UKL1142326439.29/view?cp=1

The project activity does not have any negative impact to stakeholders and running satisfactorily since commissioning. The Environment Impact Assessment study was conducted for the project activity and judicious efforts to cause minimal impacts on the surrounding environment and to maintain the natural balance. .

2.4.2 Local Stakeholder Consultation

Stakeholder Meeting was conducted by the PP during the CDM registration. Please refer to the Section E of the registered CDM PDD, wherein the details regarding the Stakeholder Meeting has been detailed out.

Web-link: https://cdm.unfccc.int/Projects/DB/SGS-UKL1142326439.29/view?cp=1

The PP also placed a grievance register onsite where the stakeholder can put down his/her complain and the same if found genuine will be addressed immediately.

3 DATA AND PARAMETERS

3.1 Data and Parameters Available at Validation

Data / Parameter	EFy
Data unit	t CO_2/MWh
Description	CO_2 emission factor for the regional grid system
Source of data	CEA published grid emission factors
Value applied	0.86 Average of 3 year OM and its 0.25 weighted and recent year BM, and its 0.75 weighted for second crediting period
Justification of choice of data or description of measurement methods and procedures applied	With a view to obtaining uniformity of approach in the country towards a common objective, Central Electricity Authority (CEA) values have been used, which are authentic and are made available publicly by Govt of India
Purpose of the data	Calculation of baseline emissions
Comments	The value applied is the arithmetic mean of the Operating Margin (OM, adjusted for imports) and the Build Margin (BM)

Data / Parameter	Cap BL
Data unit	W
Description	Installed capacity of the hydro power plant before the implementation of the project activity. For new hydro power plants, this value is zero
Source of data	Project site
Value applied	0

Justification of choice of data or description of measurement methods and procedures applied	Determine the installed capacity based on recognized standards. Since the project is new hydro plant, the value is zero as per the methodology.
Purpose of the data	NA
Comments	NA

Data / Parameter	ABL
Data unit	m2
Description	Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m2). For new reservoirs, this value is zero
Source of data	Project site
Value applied	0
Justification of choice of data or description of measurement methods and procedures applied	Measured from topographical surveys, maps, satellite pictures, etc.. Since the project is new hydro plant, the value is zero as per the methodology.
Purpose of the data	NA
Comments	NA

3.2 Data and Parameters Monitored

Data / Parameter	**EG** $_{facility, export, y}$
Data unit	MWh
Description	Quantity of electricity supplied by the project plant/unit to the grid in year y
Source of data	From the Joint Meter Reading (JMR)
Description of measurement methods and procedures to be applied	The power generated in three generators has been evacuated through Line 1 and Line 2 and both the Lines are having separate Main and Check meter. The electricity supplied to the grid is monitored by main and check meter in Line 1 and Line 2
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	126,313
Monitoring equipment	The data is accurately measured by high quality and high accuracy meters installed. Every month these readings are recorded by plant personnel and KPTCL, which are archived for cross-checking. These meter readings in Line1 and Line 2 are used to determine the electricity supplied to the grid by the project activity and are used to raise invoice. The meters are in the custody of KPTCL.

	The meters are calibration at least once a year. Details of the energy meters are given below: Meter type: Trivector Make: L&T Accuracy Class: 0.2s Meter Serial No: Main Meters: (Line1: 02048056, Line 2: 03129375). Check Meters: (Line1: 03129382, Line 2: 03129379)
QA/QC procedures to be applied	As per CDM PDD, the calibration frequency of the energy meters is annual. During the monitoring period the calibration is done within the required frequency. All the above meters are calibrated on the following dates:

Meter serial no	Calibration date	Due date
02048056 03129382 03129375 03129379	16.09.2014	15.09.2015
	19.03.2015	18.03.2016
	10.02.2016	09.02.2017
	16.07.2016	15.07.2017
	27.06.2017	26.06.2018

Also the energy meter readings crosschecked with the electricity invoices raised to DISCOM.

Purpose of the data	Calculation of baseline emissions
Calculation method	Every month, the energy export reading will be recorded. And the difference between the current month export and previous month export reading will provide the respective month export units. Since this monitoring period ends on 19-October-2019, the export data in the JMR for the month of October is apportioned for 19 days as below: = (Export value for the month of October x 19)/31
Comments	The data will be archived electronically and will be kept at least for 2 years after the end of the last crediting period.

Data / Parameter	**EG** $_{facility, import, y}$
Data unit	MWh
Description	Quantity of electricity imported by the project plant/unit from the grid in year y
Source of data	From the Joint Meter Reading (JMR)
Description of measurement methods and procedures to be applied	The power generated in three generators has been evacuated through Line 1 and Line 2 and both the Lines are having separate Main and Check meter. The

<table>
<tr><td></td><td>electricity imported from the grid is monitored by the Main meter and the Check meter in Line 1 and Line 2 installed in the switchyard area near the plant.</td></tr>
<tr><td>Frequency of monitoring/recording</td><td>Continuous monitoring and monthly recording</td></tr>
<tr><td>Value monitored</td><td>533</td></tr>
<tr><td>Monitoring equipment</td><td>The data is accurately measured by high quality and high accuracy meters installed. Every month these readings are recorded by plant personnel and KPTCL, which are archived for cross-checking. These meter readings in Line1 and Line 2 are used to determine the electricity supplied to the grid by the project activity and are used to raise invoice. The meters are in the custody of KPTCL. The meters are calibration at least once a year.

<u>Details of the energy meters are given below:</u>
Meter type: Trivector
Make: L&T
Accuracy Class: 0.2s
Meter Serial No:
Main Meters: (Line1: 02048056, Line 2: 03129375).
Check Meters: (Line1: 03129382, Line 2: 03129379)</td></tr>
<tr><td>QA/QC procedures to be applied</td><td>As per CDM PDD, the calibration frequency of the energy meters is annual. During the monitoring period the calibration is done within the required frequency. All the above meters are calibrated on the following dates:
<table>
<tr><th>Meter serial no</th><th>Calibration date</th><th>Due date</th></tr>
<tr><td rowspan="5">02048056
03129382
03129375
03129379</td><td>16.09.2014</td><td>15.09.2015</td></tr>
<tr><td>19.03.2015</td><td>18.03.2016</td></tr>
<tr><td>10.02.2016</td><td>09.02.2017</td></tr>
<tr><td>16.07.2016</td><td>15.07.2017</td></tr>
<tr><td>27.06.2017</td><td>26.06.2018</td></tr>
</table>
Also the energy meter readings crosschecked with the electricity invoices raised to DISCOM.</td></tr>
<tr><td>Purpose of the data</td><td>Calculation of baseline emissions</td></tr>
<tr><td>Calculation method</td><td>Every month, the energy import reading will be recorded. And the difference between the current month import and previous month import reading will provide the respective month export units.
Since this monitoring period ends on 19-October-2019, the import data in the JMR for the month of October is apportioned for 19 days as below:
= (Import value for the month of October x 19)/31</td></tr>
<tr><td>Comments</td><td>The data will be archived electronically and will be kept at least for 2 years after the end of the last crediting</td></tr>
</table>

	period.

Data / Parameter	**$EG_{facility,y}$**
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	From the Joint Meter Reading (JMR) and from the invoice raised
Description of measurement methods and procedures to be applied	The net electricity supplied to the grid is the difference of power exported to the grid and power imported from the grid in Line 1 and Line 2. A monthly Joint Meter Reading(JMR) is prepared for Line 1 and Line 2 and the summation of the same has been considered for the purpose of raising of Invoice and the same has been taken for emission reduction calculation
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	125,781
Monitoring equipment	NA. It is estimated from the monthly export and import value which are measured using the energy meter.
QA/QC procedures to be applied	The data is accurately measured by high quality and high accuracy meters installed which are regularly calibrated. Every month these readings are recorded by plant personnel and KPTCL, which are archived for cross-checking. The energy generation can cross checked through another set of meters kept in the generator control and metering panel in the control room for unit 1 and Unit 2 separately. Also the energy meter readings crosschecked with the electricity invoices raised to DISCOM.
Purpose of the data	Calculation of baseline emissions
Calculation method	It is estimated from electricity export and import as below: $EG_y = EG_{Facility, Export, y} - EG_{Facility, Import, y}$
Comments	The data will be archived electronically and will be kept at least for 2 years after the end of the last crediting period.

Data / Parameter	**Cap_{PJ}**
Data unit	W
Description	Installed capacity of the hydro power plant after the implementation of the project activity

Source of data	Project site
Description of measurement methods and procedures to be applied	Determine the installed capacity based on recognized standards. The project capacity is fixed at the time of installation of the project and the capacity has to be checked every year to ensure that there is no change from the value as mentioned during the registration of the project
Frequency of monitoring/recording	Yearly
Value monitored	18000000
Monitoring equipment	NA. Checked as per the nameplate details of the Turbine-generator.
QA/QC procedures to be applied	NA
Purpose of the data	NA
Calculation method	NA
Comments	NA

Data / Parameter	APJ
Data unit	m^2
Description	Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full
Source of data	Project site
Description of measurement methods and procedures to be applied	Measured from topographical surveys, maps, satellite pictures, etc. The same has to be checked with the data available during the registration of the project.
Frequency of monitoring/recording	Yearly
Value monitored	40000
Monitoring equipment	NA. The reservoir capacity is not changed during the monitoring period.
QA/QC procedures to be applied	NA
Purpose of the data	NA
Calculation method	NA
Comments	NA

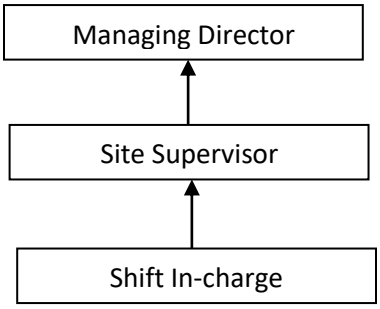
3.3 Monitoring Plan

A CDM project team is constituted with participation from relevant departments. People are trained on CDM concept and monitoring plan. This team will be responsible for data collection and archiving. This team will meet periodically to review CDM project activity check data collected, emissions reduced etc. On a weekly basis, the monitoring reports are checked and

discussed by the seniors CDM team members/managers. In case of any irregularity observed by any of the CDM team member, it is informed to the concerned person for necessary actions. On monthly basis, these reports are forwarded at the management level.

Project Management Plan:

For the purpose of internal audit, PP has formulated Project Management plan. A CDM project team is constituted with participation from relevant departments. People are trained on CDM concept and monitoring plan. This team will be responsible for data collection and archiving. This team will meet periodically to review CDM project activity check data collected, emissions reduced etc. On a weekly basis, the monitoring reports are checked and discussed by the seniors CDM team members/managers. In case of any irregularity observed by any of the CDM team member, it is informed to the concerned person for necessary actions. Once in six months the report of Internal Auditor is forwarded to the management level.



Managing Director: MD has the responsibility to comply with the CDM monitoring plan. Site Supervisor: Responsibility for completeness of data, reliability of data (calibration of meters), and monthly report generation .
Shift In-charge: Responsibility of daily report generation.

Parameters requiring monitoring:

The power generated in three generators has been evacuated through Line 1 and Line 2 and both the Lines are having separate Main and Check meter. Beginning of every Month a Joint Meter Reading (JMR) of Line 1 and Line 2 (which will contain the export and import of both the main meter and check meter separately) will be jointly taken by KPTCL and Project Proponent. Based on this JMR a summation sheet will be attached along with the Invoice where in summation of Net Electricity Exported(difference of export and import as per JMR) is calculated and the value of the same is used while raising the Invoice. The parameter required for the estimation of emission reductions is the net electricity exported to the KPTCL grid, which is taken from the Invoice.

Completeness:

For Electricity generation data: The project activity has installed the latest state of art monitoring and control equipment that measure, record, report, monitor and control various key parameters. Real time data collection happens using these control systems. An hourly log of data is also prepared by the shift in-charge. A daily report of aggregation of these data is also prepared. Parameters monitored are power exported to the grid and power imported from the grid.

Reliability:

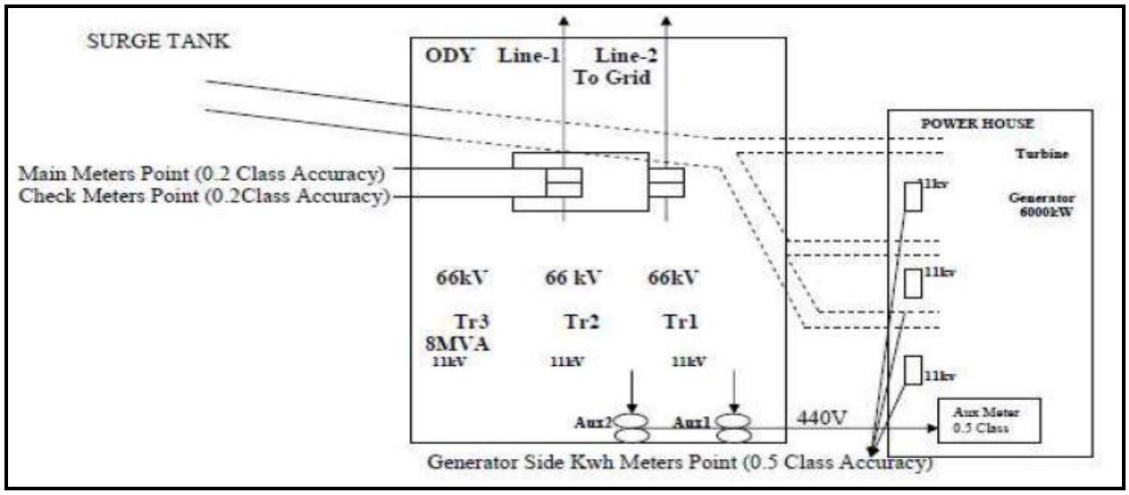
For Electricity generation data automatic control meters regarding power generation and exports are regularly maintained. The regular plant operating & maintenance procedures also include process of regular meter testing, calibration & maintenance.

A Joint Monitoring Report (JMR) is prepared on the basis of the joint meter reading taken by the plant personnel and KPTCL. Actual power generation data is also metered using power output meter maintained by KPTCL. Every year KPTCL calibrates these meters.

The receipt of sales shall be used to validate the data accuracy. Frequency- Net energy supplied is measured continuously and recorded monthly A monthly Joint Monitoring Report (JMR) is prepared. Positioning of Meters and Details of equipment to be monitored.

The Meter specifications are as below:-

Line Details	**Make**	**Serial Number of Meter**	**Model Number**
Line 1 (Main Meter)	L&T Make	02048056	ER300P
Line 1 (Check Meter)	L&T Make	03129382	ER300P
Line 2 (Main Meter)	L&T Make	03129375	ER300P
Line 2 (Check Meter)	L&T Make	03129379	ER300P



The above Main meter and Check Meter in the switchyard are sealed by KPTCL and are generally calibrated once in a year by KPTCL with a pre-calibrated meter. The installed meters are two-way meter and are used for both export and import. The electricity exported to the grid is sum of export measured by Line 1 and Line 2 and same for import of electricity too. The energy generation can also be seen through another set of meters kept in the generator control and metering panel in the control room for unit 1 and Unit 2 separately

Accuracy: The meters are all tri vector L&T make. The meters have high accuracy level of 0.2%.
Calibration of meters: Calibration of main meters and check meters is done on yearly by KPTCL people.

Dealing with uncertainty: Check meters are provided in line with main meters to take care of any uncertainty related to electricity measurement.

Data storage and Archiving

All the data items monitored under the monitoring plan will be kept for 2 years after the end of crediting period or till the last issuance of CERs for this project activity whichever occurs later. The monitored data will be presented to an independent verification agency or DOE to whom verification of emission reductions will be assigned.

Training of Operators- Since there are no major changes in the production technology, no extensive initial training is required. The operator's team is trained on CDM concepts. Operators are also trained on monitoring of data and record keeping (part of usual plant performance data monitoring).

Emergency Preparedness Plan: Plant has a documented Emergency Preparedness plan. This plan covers operating procedures, Do's and Don't' during emergency.

Monitoring of sustainable development indicator: The project activity contributes to sustainable development of the region. GHG reduction, power generation and employment generation are the main benefits arising from the project implementation. GHG reduction and power generation are monitored regularly as explained in the above monitoring plan. The project activity also keeps a record of number of people employed directly in the project activity

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

The Baseline emission calculation is based on ex-ante option chosen and as per the registered PDD the value i.e. EF_y = 0.86 tons CO_2/MWh.

The baseline is the MWh produced by the project activity multiplied by an emission coefficient (measured in tonnes CO_2/MWh) calculated in a transparent and conservative manner as the weighted average emissions (in tonnes CO_2/MWh) as described in approved revised PDD (for 2nd monitoring period).

$BE_y = EG_y \times EF_y$

Where,

BE_y is baseline emissions in year y, tCO_2e

EG_y is the net electricity supplied to the grid in year y and is applied directly from JMR certified by state utility. This value can also be cross checked from the invoice.

EF_y is the CO_2 emission factor of the grid (0.86 tCO_2e/MWh fixed ex-ante).

Baseline Emission for the period (01/12/2014 to 19/10/2017)

Year	Net electricity supplied to grid	Grid emission factor	Baseline emission

	(MWh)	**(tCO_2e/MWh)**	**(tCO_2e)***
2014	1740	0.86	1496
2015	42872	0.86	36869
2016	43378	0.86	37305
2017	37791	0.86	32500
Total	**125781**	0.86	**108170**

**Rounded down values*

4.2 Project Emissions

Since there is no change in the installed power capacity and the reservoir area, there is no change in the power density.

The power density for this monitoring period calculated as below:

Power Density = 18000000 W / 40000 m^2 = 450 W/ m^2

It can also be noted that the power density of the project is greater than 10W/m^2 and hence the project CH4 emissions from the reservoir is considered as zero as per methodology.

As per the ACM0002, there are no other project related emissions.

Hence, project emission is zero.

4.3 Leakage

As per ACM0002 the main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction, fuel handling (extraction, processing, and transport), and land inundation (for hydroelectric projects – see applicability conditions above). Project participants do not need to consider these emission sources as leakage in applying this methodology.

4.4 Net GHG Emission Reductions and Removals

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2014	1,496	0	0	1,496
2015	36,869	0	0	36,869
2016	37,305	0	0	37,305

2017	32,500	0	0	32,500
Total	108,170	0	0	108,170

APPENDIX X: <TITLE OF APPENDIX>

Not Applicable