Monitoring report form

(Version 05.1)

MONITORING REPORT		
Title of the project activity	10 MW bundled Luni–III & Luni–II hydroelectric projects for a grid system at Sri Sai Krishna Hydro Energies Private Limited in Kangra District, Himachal Pradesh.	
UNFCCC reference number of the project activity	2698	
Version number of the monitoring report	02	
Completion date of the monitoring report	30-Mar-2016	
Monitoring period number and duration of this monitoring period	First Monitoring Duration 12/02/2010 to 31/12/2015	
Project participant(s)	Sri Sai Krishna Hydro Energies (P) Limited	
Host Party	India	
Sectoral scope(s)	**Type I,** Renewable Energy projects	
Selected methodology(ies)	AMS-I.D.ver.13 - Grid connected renewable electricity generation	
Selected standardized baseline(s)	N/A	
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	191,835 tCO_2e (for 5 Years 10 Months 16 Days)	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
	101,763 tCO_2e	117,150 tCO_2e

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

>> The Purpose of 10MW Bundled Luni-III& Luni-II Hydroelectric projects is to generate clean electrical energy in a sustainable manner & The project activity is a bundle of two individual hydroelectric projects (a) Luni-III small hydroelectric project & (b) Luni-II small hydroelectric project of capacity 5 MW each across Luni Khad, a tributary of river Binwa in Baijnath Tehsil, Kangra District of Himachal 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 Himachal Pradesh State Electricity Board (HPSEB).Thus electricity is generated through sustainable means without causing any negative effect on the environment.

The total capacity of the Turbine Generators are 10MW. Which generates electricity at 3.3 Level and evacuated at 33KV level and the project proponent does not result in GHG Emission's and it does not cause any Negative impact on the environment.

The project Units have been commissioned and came to operation's for Luni-II on 01/11/2009 & for Luni-III operation was started on 22/05/2009 , Registered with CDM EB on 12/02/2010. The present Monitoring Period (1st Verification) is from 12/02/2010 to 31/12/2015), the net electricity exported to the state Grid is 2,71,206 Mwh and the net emission reductions are 219802 tCO2e for the present Monitoring Period.

A.2. Location of project activity

The locations of the two are as follows:

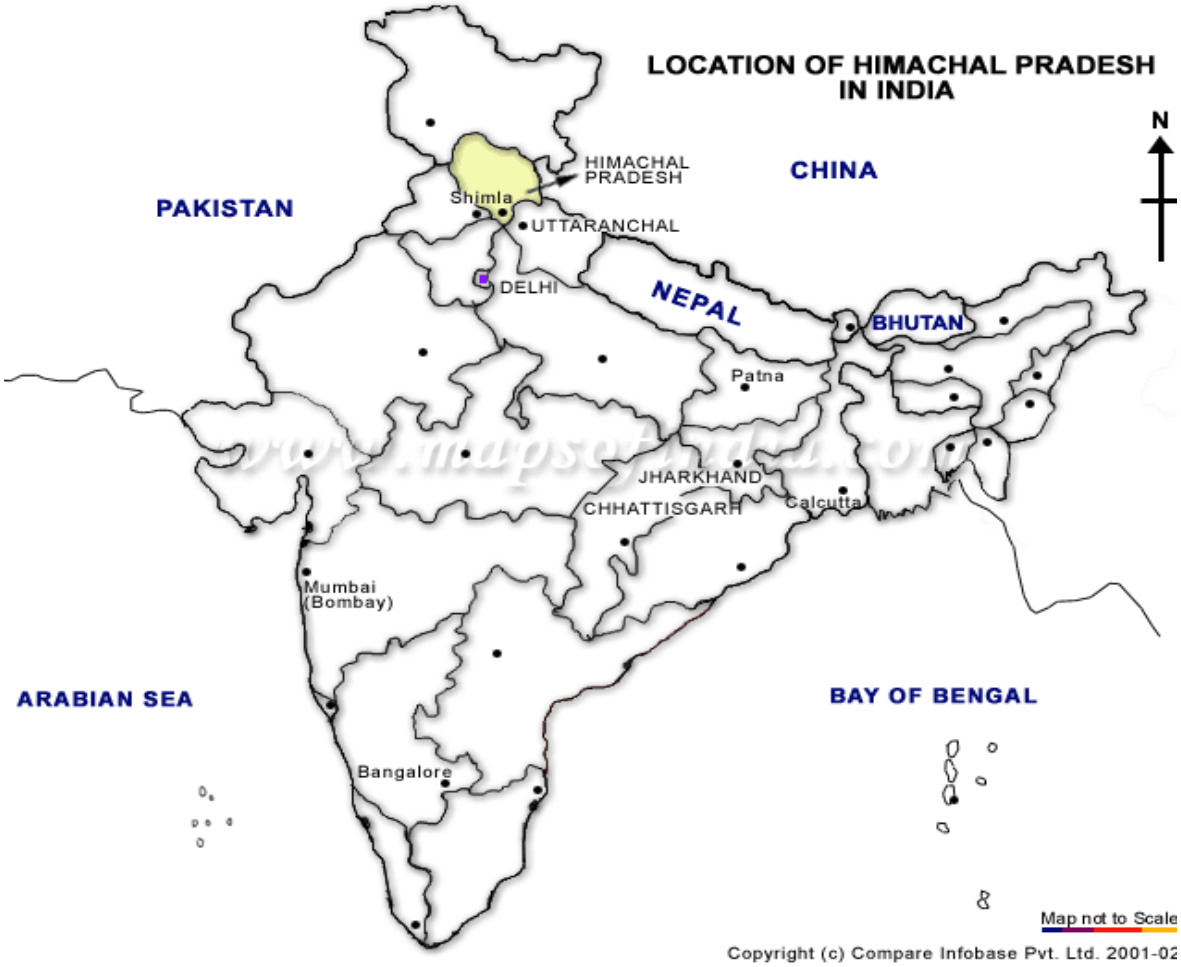
Luni–III:

Luni-III is located at a distance of 18kms from Baijnath town in Kangra district of Himachal Pradesh. The geographical co-ordinate of the project site is between longitude 76°45' E and 76°47'E and latitude 34°11' N and 32°12'N.

Luni-II:

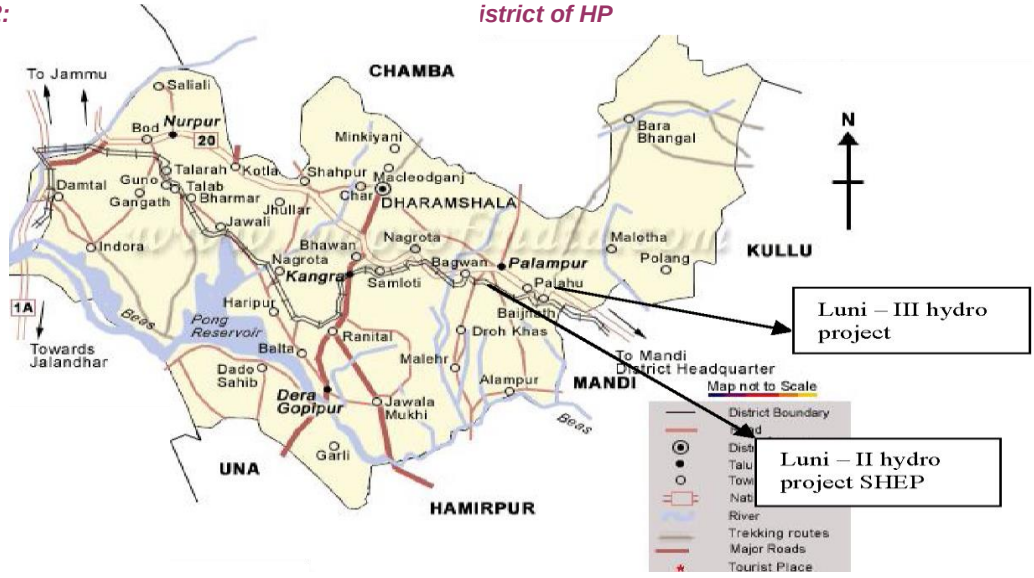
Luni-II is a downstream development of Luni-II Project The geographical co-ordinate of the project site is between longitude 76°41' E and 77°47'E and latitude 32°5' N and 32°10'N.

Physical location of the project is marked in the maps below:



Map 1: Location of Himachal Pradesh state in India

Map 2: *istrict of HP*



A.3. Parties and project participant(s)

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate whether the Party involved wishes to be considered as project participant (yes/no)
India	Private Entity: **Sri Sai Krishna Hydro Energies (P) Limited**	No

A.4. Reference of applied methodology and standardized baseline

>> Project Category Title : Type I, Renewable Energy projects

Reference: AMS-I.D, Version 13, "Grid connected renewable electricity generation"

A.5. Crediting period of project activity

>> The Crediting period of the project Activity is fixed. The length of crediting period is 10 years. Fixed crediting period is from 12 Feb 2010 to 11 Feb 2020

A.6. Contact information of responsible persons/entities

>>

Name/ Entity	Project Participant(Yes/No)
Sri Sai Krishna Hydro energies Pvt Ltd Plot No: 1367 ;Road No:45 Hyderabad-500033 Telephone: +91-40-40301100 E-Mail: raju.m@greenkogruop.com	Yes

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

>> The technology for Power generation in a hydro electric plant is converting the potiential energy available in water flows in to mechanical energy using Hydro turbines and then electric energy using Alternators. And the generated power will be transformed to the nearest Grid substation for Proper interconnection and smooth Evacuation of power.

The total capacity of the Turbine Generators are 10MW. Which generates electricity at 3.3 Level and evacuated at 33KV level and the project proponent does not involve in any GHG Emission's and it does not cause any Negative impact on the environment

The monitoring plan includes monitoring of energy parameters such as Gross energy, Auxiliary Consumption, energy export to the HPSEB grid system, energy import to the project activity from grid and also consumption of diesel for DG set operation. Emission reductions resulted from the project activities will be calculated using the energy fed in accordance with the calculations

Parameter	Luni-III	Luni-II
Hydrology		
Design Discharge	1.32Cumecs	1.98 Cumecs
Gross Head	448.13 m	302.00 m
Net Rated Head	441.11 m	292.75 m
Plant Equipment		
Type of Hydro Turbine	Pelton Wheel	Pelton Wheel
type of Generator	Synchronous, Brushless	Synchronous, Brushless
No of Generating Units	2	2
Capacity of Each Generating Units	2.5 M.w	2.5 M.w
Generating Voltage	3.3 K.V	3.3 K.V
Grid Interfacing Voltage	33Kv	33KV
Frequency	50Hz	50Hz
HPSEB Substation	132/11KV At Dehan	132/11KV at Dehan
Energy		
Gross Energy Generation	21900MWH	21900MWH
Auxiliary Consumption (8%)	1752 MWh	1752MWh
Annual Export to Grid	20148MWh	20148MWh

The Commercial Operation of the Project was started for Luni-II on 01/11/2009 & for Luni-III operation was started on 22/05/2009, Registered with CDM EB on 12/02/2010.

B.2. Post-registration changes

B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

>> N/A

B.2.2. Corrections

>> N/A

B.2.3. Changes to start date of crediting period

>> N/A

B.2.4. Inclusion of a monitoring plan to the registered PDD that was not included at registration

>> N/A

B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

>> N/A

B.2.6. Changes to project design of registered project activity

>> N/A

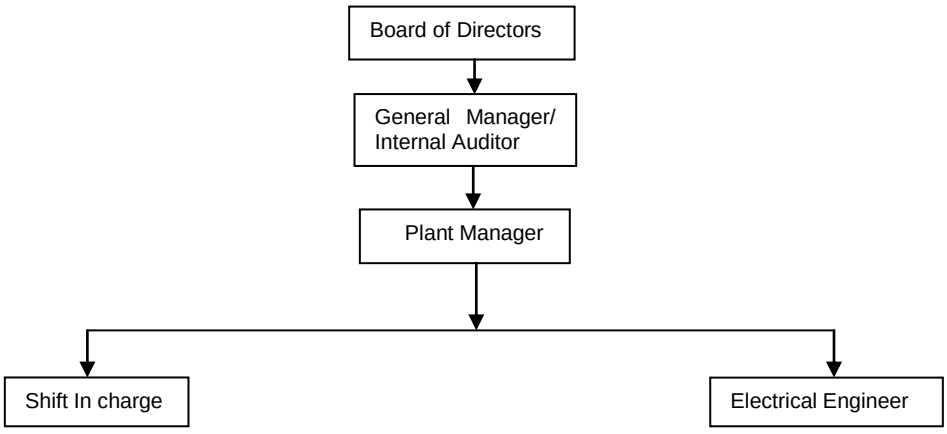
B.2.7. Types of changes specific to afforestation or reforestation project activity

>> N/A

SECTION C. Description of monitoring system

>> The monitoring plan includes monitoring of energy parameters such as Gross energy, Auxiliary consumption, energy export to the HPSEB grid system, energy import to the project activity from grid and also consumption of diesel for DG set operation. Emission reductions resulted from the project activities will be calculated using the energy fed in accordance with the calculations

A CDM team has been formed in Sri Sai Krishna Hydro Energies (P) Limited for monitoring and verification of all the monitoring parameters as per the guidelines formulated by the management. Qualified and trained people to monitor the parameters and emission reduction calculations for Sri Sai Krishna Hydro Energies are the sole agency responsible for implementation and monitoring of the project activity. The monitoring plan, which will be implemented by the project proponent describes about the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.The monitoring organization structure is shown below:



Roles and Responsibilities:

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data would rest with the Board of Directors, who might delegate the same to the General Manager or an internal

The net energy fed to the grid system by the project activities will be recorded by project proponents using either of the two meters (main meter and check meter) in the presence of the representative of HPSEB in a document whose format is acceptable to HPSEB. Representatives of both the project proponent and HPSEB will sign the document which will contain all details such as

the equipment data, calibration status, previous reading, current reading, export, import, net billable units, date and time of recording etc. This document will be used as a basic document for monitoring and verification of the net energy exported to the grid. HPSEB will pay to project proponents based on this document.

Monitoring Team:

S No	Name	Responsibility
1.	Mr M Thirumala Raju	Overall project implementation
2.	S.k vali	Technical Audit, daily monitoring parameters
3.	Mr. Murali Krishnam Raju M	Monitoring Report preparation & CDM Documentation, MIS Reporting and Execution.
	M Krishna Kishore	

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data/parameter:	EF_Y
Unit	tCO_2/MWh
Description	Combined Margin Approach CO_2 emission factor for the regional grid system
Source of data	Central Electricity Authority (CEA), Gov. of India: "CO_2 Baseline Database", Version 3.0, 15 December 2007. Available at www.cea.nic.in.
Value(s) applied)	0.810465
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	Base Line Emission's
Additional comments	The value is fixed Ex-ante for the entire crediting period.

D.2. Data and parameters monitored

For Luni-II Hydro Project

Data/parameter:	$EG_{gross,y}$
Unit	Mwh
Description	Electricity generated by the Luni-II hydroelectric project during the year
Measured/calculated/default	Measured
Source of data	On-Site Measurements
Value(s) of monitored parameter	144921

<table>
<tr><td>Monitoring equipment</td><td>
<table>
<tr><th>Parameter</th><th>Unit-I</th><th>Unit-II</th></tr>
<tr><td>Accuracy class (± %)</td><td>0.5</td><td>0.5</td></tr>
<tr><td>S No</td><td>HAJ213545</td><td>HAJ213546</td></tr>
<tr><td>Calibration Frequency</td><td>Annually</td><td>Annually</td></tr>
<tr><td>Calibrating Agency</td><td>RELTECH Engineers</td><td>RELTECH Engineers</td></tr>
<tr><td>Calibration Dates</td><td>29/11/2014</td><td>29/11/2014</td></tr>
</table>
</td></tr>
<tr><td>Measuring/reading/recordin g frequency:</td><td>Measured continuously, recorded monthly and aggregated annually.</td></tr>
<tr><td>Calculation method (if applicable):</td><td>N/A</td></tr>
<tr><td>QA/QC procedures:</td><td>Meters will be calibrated as per industry Standards</td></tr>
<tr><td>Purpose of data:</td><td>This data is used to calculate Base Line emission’s</td></tr>
<tr><td>Additional comments:</td><td></td></tr>
</table>

<table>
<tr><td>Data/parameter:</td><td>$EG_{Auxiliary,y}$</td></tr>
<tr><td>Unit</td><td>MWh</td></tr>
<tr><td>Description</td><td>Auxiliary electricity consumption of the Luni-II hydro electric project during the year</td></tr>
<tr><td>Measured/calculated/default</td><td>Measured</td></tr>
<tr><td>Source of data</td><td>On site Measurements</td></tr>
<tr><td>Value(s) of monitored parameter</td><td>354.97</td></tr>
<tr><td>Monitoring equipment</td><td>
<table>
<tr><th>Parameter</th><th>Luni-II</th></tr>
<tr><td>Accuracy class (± %)</td><td>0.5</td></tr>
<tr><td>Type</td><td>TM7400</td></tr>
<tr><td>Calibration Frequency</td><td>Annually</td></tr>
<tr><td>Calibrating Agency</td><td>RELTECH</td></tr>
<tr><td>Calibration Dates</td><td>29/11/2014</td></tr>
</table>
</td></tr>
<tr><td>Measuring/reading/recording frequency:</td><td>Measured Continuously</td></tr>
<tr><td>Calculation method (if applicable):</td><td>As the Data is Calculated between Gross and Net Power Export</td></tr>
<tr><td>QA/QC procedures:</td><td>As the data is calculated as difference between gross and net power export, no QA/ QC procedures are applicable, since, the both parameters are already underwent the QA/QC procedures.</td></tr>
<tr><td>Purpose of data:</td><td>This Data is used to Caluclate the Net Electricity Supplied to Grid After the Internal Usage.</td></tr>
<tr><td>Additional comments:</td><td>N/A</td></tr>
</table>

Data/parameter:	$EG_{export\ y}$
Unit	Mwh
Description	Electricity supplied to the grid by the Luni-II hydro electric project during the year y
Measured/calculated/default	Measured
Source of data	On Site Measurements
Value(s) of monitored parameter	138619
Monitoring equipment	<table><tr><th>Parameter</th><th>Main Meter</th><th>Check Meter</th></tr><tr><td>Make</td><td>Larsern & Turbo</td><td>Larsern & Turbo</td></tr><tr><td>Calibrating Agency</td><td>Power Grid corporation</td><td>Power Grid corporation</td></tr><tr><td>Calibration Dates **</td><td>Mentioned in Annexure -1</td><td>Mentioned in Annexure-1</td></tr></table> ** Calibration Dates are Provided under Annexure-1
Measuring/reading/recording frequency:	Measured monthly using calibrated meters and aggregated annually
Calculation method (if applicable):	N/A
QA/QC procedures:	Meters will be calibrated as per industry standards. Sales records to the grid and other records are used to ensure consistency.
Purpose of data:	This Data is used to Caluclate Base Line Emission's
Additional comments:	Electric power sold to the grid will be measured by main meter and check meter by HPSEB as specified in the PPA and records maintained. To be crosschecked with monthly invoices or receipts of payments.

Data/parameter:	$EG_{import,y}$
Unit	MWh
Description	Grid electricity import to the Luni-II hydroelectric project during the year
Measured/calculated/default	Measured
Source of data	On Site Measurements
Value(s) of monitored parameter	0
Monitoring equipment	<table><tr><th>Parameter</th><th>Main Meter</th><th>Check Meter</th></tr><tr><td>Make</td><td>Larsern & Turbo</td><td>Larsern & Turbo</td></tr><tr><td>Calibrating Agency</td><td>Power Grid corporation</td><td>Power Grid corporation</td></tr><tr><td>Calibration Dates **</td><td>Mentioned in Annexure -1</td><td>Mentioned in Annexure -1</td></tr></table> ** Calibration Dates are Provided under Annexure-1
Measuring/reading/recording frequency:	Measured monthly using calibrated meters and aggregated annually
Calculation method (if applicable):	N/A

QA/QC procedures:	Meters will be calibrated as per industry Standards
Purpose of data:	This Data is used to Calculate Base Line emission's
Additional comments:	N/A

Data/parameter:	EG_Y
Unit	MWh
Description	Net Electricity supplied to the grid by the Luni-II hydro electric project during the year
Measured/calculated/default	Measured
Source of data	On Site Measurments
Value(s) of monitored parameter	138619
Monitoring equipment	**Parameter** / **Main Meter** / **Check Meter** Make / Larsern & Turbo / Larsern & Turbo Calibrating Agency / Power Grid corporation / Power Grid corporation Calibration Dates ** / Mentioned in Annexure -1 / Mentioned in Annexure -1 ** Calibration Dates are Provided under Annexure - 1
Measuring/reading/recording frequency:	Measured monthly using calibrated meters and aggregated annually
Calculation method (if applicable):	N/A
QA/QC procedures:	This Data is used for Emissions reduction Calculation's, Sales Receipts & Other Records to Ensure Consistency
Purpose of data:	The generated electricity delivered to power grid ($EG_{Export, y}$) and electricity imported from power grid ($EG_{Import, y}$) by Luni-II Project will be measured through meters and will be recorded monthly. The difference of $EG_{Export, y}$ and $EG_{Import, y}$ is the net generated electricity by the project (EG_y).
Additional comments:	N/A

Data/parameter:	$F_{i,y}$
Unit	*Tonnes/kilo liters*
Description	Quantity of fossil fuel type *i* combusted in the Luni-II hydroelectric project during year *y*
Measured/calculated/default	Measured
Source of data	ON site Measurements
Value(s) of monitored parameter	0
Monitoring equipment	Nill
Measuring/reading/recording frequency:	Measured

Calculation method (if applicable):	The total number of operating hours of DG set and the corresponding quantity of diesel consumed for the purpose will be recorded in the log book maintained at the DG set room. The operating hours and the quantity of diesel consumption will be recorded.
QA/QC procedures:	The Data Recorded can be cross checked Against Fuel purchase receipts
Purpose of data:	
Additional comments:	N/A

For Luni-III Hydro Project

Data/parameter:	$EG_{gross,y}$
Unit	MWh
Description	Electricity generated by the Luni-III hydro electric project during the year
Measured/calculated/default	Measured
Source of data	On Site Measurements
Value(s) of monitored parameter	139277.80
Monitoring equipment	

Parameter	Unit-I	Unit-II
Accuracy class (± %)	0.5	0.5
S No	KBA243426	8312PH1008
Calibration Frequency	Annually	Annually
Calibrating Agency	RELTECH ENgineers	RELTECH Engineers
Calibration Dates	25/11/2014	25/11/2014

Measuring/reading/recording frequency:	Measured continuously, recorded monthly and aggregated annually.
Calculation method (if applicable):	N/A
QA/QC procedures:	Meter's will be calibrated as per industry Standards
Purpose of data:	Used for calculation of Base Line emission's
Additional comments:	N/A

Data/parameter:	$EG_{Auxiliary,y}$
Unit	MWh
Description	Auxiliary electricity consumption of the Luni-III hydro electric project during the year *y*
Measured/calculated/default	On site Measurements
Source of data	On site measurements
Value(s) of monitored parameter	585.117

Monitoring equipment	<table><tr><th>Parameter</th><th>Luni-III</th></tr><tr><td>Accuracy class (± %)</td><td>0.5</td></tr><tr><td>Type</td><td>PH7700</td></tr><tr><td>Sl nO</td><td>8313PH1008</td></tr><tr><td>Calibration Frequency</td><td>Annually</td></tr><tr><td>Calibrating Agency</td><td>RELTECH Engineers</td></tr><tr><td>Calibration Dates</td><td>25/11/2014</td></tr></table>
Measuring/reading/recording frequency:	The auxiliary electricity consumption will be calculated using the data of gross and electricity exported/supplied to the grid.
Calculation method (if applicable):	N/A
QA/QC procedures:	Meters will be calculated as per industry Standards
Purpose of data:	To calculate Base Line emission's
Additional comments:	N/A

Data/parameter:	$EG_{exporty}$
Unit	MWh
Description	Electricity supplied to the grid by the Luni-III hydro electric project during the year
Measured/calculated/default	Measured
Source of data	On Site Measurements
Value(s) of monitored parameter	132586.94
Monitoring equipment	<table><tr><th>Parameter</th><th>Main Meter</th><th>Check Meter</th></tr><tr><td>Make</td><td>Larsern & Turbo</td><td>Larsern & Turbo</td></tr><tr><td>Calibrating Agency</td><td>Power Grid corporation</td><td>Power Grid corporation</td></tr><tr><td>Calibration Dates **</td><td>Mentioned in Annexure -1</td><td>Mentioned in Annexure -1</td></tr></table> ** Calibration Dates are Provided Under Annexure-1
Measuring/reading/recording frequency:	Measured monthly using calibrated meters and aggregated annually
Calculation method (if applicable):	N/A
QA/QC procedures:	Meters will be calibrated as per industry standards. Sales records to the grid and other records are used to ensure consistency.
Purpose of data:	This Data is used to Caluclate Base Line Emission's
Additional comments:	Electric power sold to the grid will be measured by main meter and check meter by HPSEB as specified in the PPA and records maintained. To be crosschecked with monthly invoices or receipts of payments.

Data/parameter:	$EG_{import,y}$
Unit	MWh

<table>
<tr><td>Description</td><td>Grid electricity import to the Luni-III hydroelectric project during the year</td></tr>
<tr><td>Measured/calculated/default</td><td>Measured</td></tr>
<tr><td>Source of data</td><td>On Site Measurements</td></tr>
<tr><td>Value(s) of monitored parameter</td><td>0</td></tr>
<tr><td>Monitoring equipment</td><td>
<table>
<tr><th>Parameter</th><th>Main Meter</th><th>Check Meter</th></tr>
<tr><td>Make</td><td>Larsern & Turbo</td><td>Larsern & Turbo</td></tr>
<tr><td>Calibrating Agency</td><td>Power Grid corporation</td><td>Power Grid corporation</td></tr>
<tr><td>Calibration Dates **</td><td>Mentioned in Annexure -1</td><td>Menctioned in Annexure-1</td></tr>
</table>
** Calibration Dates are Provided under Annexure-I
</td></tr>
<tr><td>Measuring/reading/recording frequency:</td><td>Measured Monthly Using Calibrated Meters</td></tr>
<tr><td>Calculation method (if applicable):</td><td>N/A</td></tr>
<tr><td>QA/QC procedures:</td><td>Meters will be calibrated as per industry Standards</td></tr>
<tr><td>Purpose of data:</td><td>This Data is used to Calculate Base Line emission’s</td></tr>
<tr><td>Additional comments:</td><td>N/A</td></tr>
</table>

<table>
<tr><td>Data/parameter:</td><td>$EG_{exporty}$</td></tr>
<tr><td>Unit</td><td>MWh</td></tr>
<tr><td>Description</td><td>Net Electricity supplied to the grid by the Luni-II hydro electric project during the year</td></tr>
<tr><td>Measured/calculated/default</td><td>Measured</td></tr>
<tr><td>Source of data</td><td>On Site Measurements</td></tr>
<tr><td>Value(s) of monitored parameter</td><td>132586.94</td></tr>
<tr><td>Monitoring equipment</td><td>
<table>
<tr><th>Parameter</th><th>Main Meter</th><th>Check Meter</th></tr>
<tr><td>Make</td><td>Larsern & Turbo</td><td>Larsern & Turbo</td></tr>
<tr><td>Calibrating Agency</td><td>Power Grid corporation</td><td>Power Grid corporation</td></tr>
<tr><td>Calibration Dates **</td><td>Menctioned in Annexure -1</td><td>Menctioned in Annexure-1</td></tr>
</table>
** Calibration Dates are Provided under Annexure-1
</td></tr>
<tr><td>Measuring/reading/recording frequency:</td><td>Measured monthly using calibrated meters and aggregated annually.</td></tr>
<tr><td>Calculation method (if applicable):</td><td>N/A</td></tr>
<tr><td>QA/QC procedures:</td><td>This Data is used for Emissions reduction Calculation’s, Sales Receipts & Other Records to Ensure Consistency</td></tr>
</table>

Purpose of data:	The generated electricity delivered to power grid ($EG_{Export, y}$) and electricity imported from power grid ($EG_{Import, y}$) by Luni-II Project will be measured through meters and will be recorded monthly. The difference of $EG_{Export, y}$ and $EG_{Import, y}$ is the net generated electricity by the project (EG_y).
Additional comments:	N/A

D.3. Implementation of sampling plan

>> N/A

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

>> Base Line Emissions's are calculated as followsThe baseline emissions are calculated based on the net electricity exported to the grid (in MWh/year), and an emission factor for the displaced grid electricity (in tCO2 /MWh).

$BE_y = EG_y * EF_y$

EG_y = the net electricity exported to the grid system during the year *y for* Luni-II & Luni-III Units.
EFy = the emission factor of the grid to which the project exports electricity

BE_y = 271206* 0.810465

= 219803 tCO_2

E.2. Calculation of project emissions or actual net GHG removals by sinks

>> No Projected Emission's are Applicable for Hydro Projects Since the Electricity Generation does not involve in combustion of Generation of emission's from Fossil Fuels and the Project is Equipped with diesel generator capacity of 62.5kVA to Meet the emergency requirements of power house.

Emissions out of usage of fossil fuel (diesel) will be accounted as project emissions based on the following equation.

$$PE_y = FF_{i,y} \cdot COEF_i$$

Where
PE_y Project emissions from combustion of fossil fuel (DG set) in the project activity during the year *y*
$FF_{i,y}$ Quantity of fossil fuel type *i* combusted (DG set) during the year *y*

$COEF_i$ Carbon dioxide emission factor of the fuel type *i*

The CO_2 emission coefficient COEFi fuel *i (*tCO_2 / mass or volume unit of the fuel), is obtained as
$COEFi = NCVi \cdot EF_{CO2,i} \cdot OXIDi$

COEFi = 43.3*74.1*1

COEFi = 3208.5

Where
NCVi the net calorific value (energy content) per mass or volume unit of a fuel *i*(43 TJ/Gg as per IPCC2006 default values)

OXIDi the oxidation factor of the fuel (1 as per IPCC 2006 default Values),
$EF_{CO2,i}$ the CO_2 emission factor per unit of energy of the fuel *i(*74.1 tCO_2/TJ as per IPCC 2006 default values).

Therefore $PE = FF \cdot COEF$

$PE = 0 * 3208 \quad = 0$

E.3. Calculation of leakage

>> No Leakage Emission's are considered for the proposed project Since the Project emission reductions are equal to the Base line Emission's These are calculated based on the monitored net amount of electricity supplied to the grid, and the ex-ante determined baseline emission factor.

So Ly is Considered as 0

$ER_y = BE_y - PE_y - L_y$

$ER_y = 219803 - 0 - 0 = 219803$ t CO_2e

E.4. Summary of calculation of emission reductions or net GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO_2e)	Project emissions or actual net GHG removals by sinks (t CO_2e)	Leakage (t CO_2e)	GHG emission reductions or net GHG removals by sinks (t CO_2e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
Total	219803	0	0	102653	117150	219803

E.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO_2e)	191832 tCO_2e (for 5 Years 10 Months 16 Days)	219803 tCO_2e

Note: As Per the registered CDM-PDD Annual emission's reduction's per year (i.e 365 Days) is 32658 tCO2e where as in the Monitoring period is for 5 Years 10 Months 16 Days (70 Months 16 days = **2144** Days) The estimated Emission reductions for the period is adjusted to number of days available in the monitoring period (i.e) (32658/365)*2144= **191835 tCO_2e**

E.6. Remarks on difference from estimated value in registered PDD

>> The Emission reductions during the reported period is 14.6% is more than the estimated in the registered PDD. The reason for the excess electricity generation compared to the estimate in the CDM PDD is that the excess rainfall and snow melting in the catchments area of river Binwa in Baijnath Tehsil, Kangra Dist. Was above normal for the region which resulted in the availability of excess water flows in the river.

Annexure – 1

Main Meter & Check meter calibration details

	serial No	Period of usage	Date of calibration
Main Meter	07033715		
Check Meter	0733705	21/04/09 to 20/04/2010	21-04-2009
Main Meter	07360988		
Check Meter	07360973	27-04-09 to 20/04/10	27-04-2009
Main Meter	07360973	28/05/10 to 08/09/10	
Check Meter	07360988		28-05-2010
Main Meter	07033715		
Check Meter	07033705	17/02/11 to 20/01/12	17-02-2011
Main Meter	07360973		
Check Meter	07360988	15/11/11 to 20/01/2012	14-11-2011
Main Meter	07033705	03/03/2012 to 10-01-13	09-03-2012
Check Meter	07033715		
Main Meter	07041343	22/08/2012 to 10-01-13	23-08-2012
Check Meter	07041344		
Main Meter	07360973	08/02/2013 10-01-2014	11-02-2013
Check Meter	07360988		
Main Meter	07041343		
Check Meter	07041344	10/07/13 to 01/01/14	10-07-2013
Main Meter	07041343		
Check Meter	07041344	01/09/13 to 31/3/14	01-09-2013
Main Meter	13191233		
Check Meter	13191167	25/11/13 to 25/07/14	25-11-2013
Main Meter	07041343		
Check Meter	07041344	25/07/14 to 07/2/2015	25-07-2014
Main Meter	13191233		
Check Meter	13101167	07/02/15 to 25/08/2015	07-02-2015
Main Meter	07041343	25/08/15 to 14/01/16	25-08-2015

Appendix 1. Contact information of project participants and responsible persons/entities

Project participant and/or responsible person/ entity	☒ Project participant ☐ Person/entity responsible for completing the CDM-MR-FORM
Organization name	M/S Sri Sai Krishna Hydro energies Pvt Ltd
Street/P.O. Box	Jubilee Hills Road No-45
Building	Plot No-1367
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State/region	Telangana
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Telephone	+91-40-40301000
Fax	
E-mail	raju.m@greenkogroup.com
Website	www.Greenkogruop.com
Contact person	
Title	Mr
Salutation	
Last name	Mandapathi
Middle name	Raju
First name	Thirumala
Department	AVP SPG Operation's
Mobile	
Direct fax	

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Document information

Version	*Date*	*Description*
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, 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	28 May 2010	EB 54, Annex 34. Initial adoption.

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