




**Validation report form for renewal of crediting period for  
CDM project activities  
(Version 03.0)**

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

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	Jorethang Loop Hydroelectric Project, India (UNFCCC number-1326 <sup>1</sup> )
<b>Number and duration of the next crediting period</b>	Second renewable crediting period 01/01/2019 to 31/12/2025
<b>Version number of the validation report</b>	02
<b>Completion date of the validation report</b>	23/11/2019
<b>Version number of PDD to which this report applies</b>	06
<b>Project participants</b>	M/s. DANS Energy Private Limited
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0.
<b>Mandatory sectoral scopes</b>	01
<b>Conditional sectoral scopes, if applicable</b>	NA
<b>Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period</b>	390,589 tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	Earthood Services Private Limited UNFCCC Ref. No.: E-0066
<b>Name, position and signature of the approver of the validation report</b>	 Dr. Kaviraj Singh Managing Director

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/DNV-CUK1188881385.79/view>

## SECTION A. Executive summary

M/s. DANS Energy Private Limited has developed hydro power plant on the Rangit River in the state of Sikkim, India. The Rangit River is a tributary of the Teesta River, which is the main river traversing the state of Sikkim. The project involves the construction of a diversion barrage, 108 m in length and 17 m in height, which create a small reservoir of approximately 14.489 ha. The project have installed capacity of 96 MW and generate approximately 444.03 GWh (gross) per annum.

The unit I of 48 MW was declared commissioned on 26/09/2015 and unit II of 48 MW on 01/10/2015 by EASTERN REGIONAL POWER COMMITTEE.

The main purpose of the project is to use the hydro potential of the Rangit River to generate zero emission electricity. The electricity generated will be exported to the Eastern Regional grid (Central Transmission Utility (CTU)) through the Eastern Regional Load Dispatch Centre (ERLDC) and sold to third party consumers through open access market or through Power Purchase Agreement (PPA)..

The project activity is a grid connected renewable energy project that supplies electricity to the INDIAN grid, thus it comes under the Sectoral scope Sectoral Scope : 1 Energy industries (renewable / non-renewable sources). The estimated ERs of the project activity are 390,589 tCO<sub>2</sub>e.

**Validation Scope:** The scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0. The validation was based on the requirements in the CDM validation and verification standard for project activities, version 02.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design document.

### **Scope of validation**

M/s. DANS Energy Private Limited has contracted ESPL to conduct the validation of the renewal of the crediting period of the project activity "Jorethang Loop Hydroelectric Project, India".

The scope of the validation is to establish that:

- the PA is in accordance with all relevant CDM rules and requirements;
- the PA is in accordance with conditions of the latest version of applied methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0;
- the validation of the renewal of crediting period is in accordance with requirements of CDM methodological tool "TOOL11 – Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period" – version 03.0.1.

### **Validation Process:**

The validation process involved the following:

- contract with project proponent for the scope of validation of the renewal of the crediting period of the project activity;
- desk review;
- physical on-site inspection;
- issuance of validation findings;
- reporting, calculation checks, QA/QC and resolution of findings;
- issuance of draft validation report;
- independent technical review of the project documentation;
- issuance of the final validation report;
- submission of the request for renewal, as appropriate

## Conclusion

ESPL has performed a validation of the the renewal of the crediting period of the CDM PA “Jorethang Loop Hydroelectric Project, India” for second crediting period.

The validation team has confirmed that it is in accordance with all relevant CDM rules and requirements and conditions of the latest version of applied methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0. In addition, it was confirmed that the monitoring system is feasible and the estimated emission reductions are conservatively calculated.

The PA is expected to generate an annual average of 390,589 tCO<sub>2</sub>e in the second crediting period.

A site visit has been performed for the validation of the renewal of the crediting period on and 03/10/2019.

Therefore, the request for renewal of the crediting period of the PA is being submitted in accordance with the CDM procedures.

## SECTION B. Validation team, technical reviewer and approver

### B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	EI	Takarkhede	Atul	Central Office	Y	Y	Y	Y
2.	Technical Expert (TA1.2)	EI	Takarkhede	Atul	Central Office	Y	Y	Y	Y
3.	Methodology Expert	IR	Garg	Shreya	Central Office	Y	N	N	Y
4.	Local Expert	EI	Takarkhede	Atul	Central Office	Y	Y	Y	Y
5.	Verifier	EI	Takarkhede	Atul	Central Office	Y	Y	Y	Y

### B.2. Technical reviewer and approver of the validation report for RCP

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Gupta	Anshika	Central Office
2.	TA expert to TR	IR	Gupta	Anshika	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

## SECTION C. Means of validation

### C.1. Desk/document review

A desk review was conducted by the validation team that included:

- a review of the data and information presented to assess its completeness;
- a review of the registered project activity, the applied methodology including applicable tool(s) and, where applicable, the applied standardized baseline;
- a review of supporting documents.

A complete list of documents/evidences reviewed is included as Appendix 3.

**C.2. On-site inspection**

Duration of on-site inspection: 03/10/2019				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening Meeting: Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including venue for closing meeting and any concerns from PP.	Pipe Village, Jorethang Town, South Sikkim, India	03/10/2019	Atul Takarkhede
2.	Implementation and operation of project activity (project boundary, technology, project equipment, monitoring and metering equipment) as per registered PDD/previous verification.			
3.	Physical inspection of the project activity and Substation (if applicable): Site visit and interview of personnel			
4.	Revalidation checklist: compliance of monitoring procedures, regulations, application of methodology and baseline calculation compared with registered PDD and monitoring methodology.			
5.	Review of ex-ante calculation and relevant document in accordance with registered monitoring plan and applied monitoring methodology.			
6.	Compilation of the audit findings.			
7.	Closing Meeting: Submission of the audit findings to the client and agreement on the issues raised and agreement on timelines.			

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Ghodekar	Santosh	DGM, O&M	03/10/2019	- Project Implementation - Operation and Maintenance - Calibrations etc.	Atul Takarkhede
2.	Mengar	Amol	Dy. Manager		- Plant Operation and Maintenance - SCADA	
3.	Singh	Pankaj	Asst. Engg.		- SCADA - Operational control	
4.	Nandy	Shrishendu	Asst. Engg.		- Operational control	

**C.4. Sampling approach**

The assessment team did not apply any sampling approach for the project activity. The site visit was conducted for complete power plant implemented in the location as mentioned in the PDD<sup>/3/</sup>.

**C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised**

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	CL#02	CAR#03	00

		CAR#04	
Application and selection of methodologies and standardized baselines	00	00	00
Validity of original baseline or its update	00	00	00
Estimated emission reductions or net anthropogenic removals	00	CAR#05 CAR#06	00
Validity of monitoring plan	00	00	00
Crediting period	00	00	00
Project participants	00	CAR#07	00
Post-registration changes	00	00	00
Others (please specify)	00	00	00
<b>Total</b>	<b>01</b>	<b>05</b>	<b>00</b>

## SECTION D. Validation findings

### D.1. Compliance with PDD form

<b>Means of validation</b>	Assessment team checked the PDD version 11.0 forms supplied by the project participant and found that the latest form applicable in the UNFCCC web site is used for the presentation of the PDD.
<b>Findings</b>	CL 02, CAR 03 & CAR 04 was raised during the validation process and closed successfully.
<b>Conclusion</b>	<p>Assessment team also checked the commissioning certificate<sup>2/</sup> and found the same to be correct. The actual commissioning date checked from the 3<sup>rd</sup> party Government documents i.e. EASTERN REGIONAL POWER COMMITTEE and found to be accurate<sup>2/</sup>.</p> <p>The latest version of the PDD template (CDM-PDD-FORM – version 11) available at the UNFCCC website has been used<sup>13/</sup>. The issues found were all addressed.</p> <p>CL 02, CAR 03 &amp; CAR 04 was raised for the commissioning certificates &amp; PPA, exact geo-coordinates and reference to additionality toll with respect to registered PDD. Same was resolved by PP in revised updated PDD. Thus, revised updated PDD for RCP has been filled out in accordance with the instructions.</p> <p>Assessment team checked the geographical coordinate of the project activity with GPS meter and found that same were not exact showing power plant. PP provided the exact coordinates in the revised PDD and same are cross checked the same with the google Map. The latitude and longitude as mentioned in the registered PDD for 1<sup>st</sup> crediting period is found correct but not exact. The details of the exact coordinates are as below:</p> <p>The exact project location is as under:</p> <p>Latitude: 27° 6' 23" N, Longitude: 88° 20' 7" E</p> <p>The technical details for the revision of Crediting period were checked by the assessment team from the details available from the manufacturers and also during the onsite visit. The details are as below:</p> <p>The proposed project is a hydroelectric project which will utilize the potential energy from a natural height drop of approximately 84m over a 12.8km stretch of the Rangit River. A diversion barrage, 108 m in length and 17m in height, is constructed which create a reservoir of approximately 14.489 ha. The flow is directed from the reservoir, through an intake tunnel on the east bank of the river, into a 7.1 km head race tunnel, through a surge shaft and pressure shaft to the powerhouse. The powerhouse is house 2 x 48.75 MW vertical shaft type Francis turbines, that is coupled with synchronous generators of capacity 2 x 48 MW. The flow is discharged via a 40m tail race channel back into the Rangit River. The project components from the head race tunnel to the flow discharge is located underground.</p> <p>The power which is generated by the project is rated at 11 kV. This is stepped up to 220 kV at the switchyard of the power house, which is located above ground. The</p>

	<p>electricity is exported through a 10 km double circuit 220 kV transmission line to the New Melli sub-station on the Eastern Regional Grid and further to Ramgpo substation.</p> <p>PRC-1326-001 was approved on 16/09/2016. No post registration changes is envisaged for the second CP as the project is implemented as per the registered PDD<sup>/5/</sup> of 1<sup>st</sup> CP and in continuous operation apart from scheduled maintenance<sup>/11/</sup> (as per manufacturer specification) and thus there is no scenario observed which can alter the requirement of the methodology<sup>7/</sup>. The project activity complies with the applicability criteria of the large scale CDM Project activity category. There is no change in installed capacity of the project as mentioned in registered PDD for 1<sup>st</sup> CP<sup>/3/</sup>. The same is checked by the assessment team during onsite visit, document review and found correct.</p>

## D.2. Application and selection of methodologies and standardized baselines

Means of validation	<p>The assessment team has validated the documentation referred to in the revised PDD for renewable of crediting period and verified the documentation content for verifying the justification of the applicability of the methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0<sup>7/</sup>. and confirmed that the documentation referred to in the PDD is correctly quoted and interpreted. The assessment team has also cross-checked the information provided in the registered PDD<sup>5/</sup> of 1<sup>st</sup> CP with the documentation other than from the PDD based on the local and sectoral knowledge of the assessment team.</p> <p>Following documentation has been reviewed by the assessment team:</p> <ul style="list-style-type: none"><li>- Site visit</li><li>- Interview with the concerned person mentioned in this report</li><li>- Technical detail analysis of the power plant from the documents submitted by the manufacturer.</li><li>- Commissioning certificates of the turbines</li></ul> <p>The assessment of the project’s compliance with the applicability criteria of ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0<sup>7/</sup> are documented in detail in section B.2 of the PDD<sup>5/</sup>.</p>								
Findings	Applicability criteria were explained properly as per the requirement of the applied approved methodology for the present crediting period. No finding was raised on the section.								
Conclusion	<p>The applied baseline methodology is justified as it has been demonstrated that the proposed project activity is:</p> <table><tr><th>S. N</th><th>Applicability Criterion</th><th>Project Case</th></tr><tr><td>1. (Para 3)</td><td><p>This methodology is applicable to grid-connected renewable energy power generation project activities that:</p><p>(a) Install a Greenfield power plant;</p><p>(b) Involve a capacity addition to (an) existing plant(s);</p><p>(c) Involve a retrofit of (an) existing operating plants/units;</p><p>(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or</p><p>(e) Involve a replacement of (an) existing plant(s)/unit(s).</p></td><td><p>As the project activity is the installation of a grid-connected Greenfield hydro power plant; hence, the Criteria 3 (a) is applicable.</p></td></tr></table>			S. N	Applicability Criterion	Project Case	1. (Para 3)	<p>This methodology is applicable to grid-connected renewable energy power generation project activities that:</p> <p>(a) Install a Greenfield power plant;</p> <p>(b) Involve a capacity addition to (an) existing plant(s);</p> <p>(c) Involve a retrofit of (an) existing operating plants/units;</p> <p>(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or</p> <p>(e) Involve a replacement of (an) existing plant(s)/unit(s).</p>	<p>As the project activity is the installation of a grid-connected Greenfield hydro power plant; hence, the Criteria 3 (a) is applicable.</p>
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	2. (Para 4)	The methodology is applicable under the following conditions: (a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	As the project activity is the installation of a grid-connected Greenfield hydro power plant; hence, the Criteria 4(a) is applicable.
		(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The project activity is greenfield project hence this condition is not relevant for the project activity.
	3. (Para 5)	In case of hydro power plants, one of the following conditions shall apply: <sup>2</sup> (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (3), is greater than 4 W/m <sup>2</sup> ; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m <sup>2</sup> ; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m <sup>2</sup> , all of the following conditions shall apply:	The Generator capacity is 96 MW and is result in an impoundment of 14.489 hectares. Thus Power Density calculation is as below as per Equation (7) of methodology: -  $PD = \frac{CapPJ - CapBL}{APJ - ABL}$ Where: <i>PD</i> = Power density of the project activity (W/m <sup>2</sup> ) <i>CapPJ</i> = Installed capacity of the hydro power plant after the implementation of the project activity (W) <i>CapBL</i> = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero <i>APJ</i> = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of

<sup>2</sup> Project participants wishing to undertake a hydroelectric project activity that result in a new reservoir or an increase in the volume of an existing reservoir, in particular where reservoirs have no significant vegetative biomass in the catchments area, may request a revision to the approved consolidated methodology.

		<p>(i) The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m<sup>2</sup>;</p> <p>(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;</p> <p>(iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m<sup>2</sup> shall be:</p> <p>a. Lower than or equal to 15 MW; and</p> <p>b. Less than 10 per cent of the total installed capacity of integrated hydro power project</p>	<p>the project activity, when the reservoir is full (m<sup>2</sup>)</p> <p><math>A \text{ BL} = \text{Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m}^2\text{). For new reservoirs, this value is zero}</math></p> <p>Hence, <math>PD = \frac{(96000000-0)}{(144890-0)}</math></p> <p><math>= 662.571 \text{ W/m}^2</math></p> <p>As the power density of the power plant is greater than 4 W/ m<sup>2</sup>, the criterion 5(c) is applicable to the project activity.</p>
	4 (Para 6)	<p>In the case of integrated hydro power projects, project proponent shall:</p> <p>(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or</p> <p>(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.</p>	<p>The above mentioned points in Section 6 (a) &amp;(b) of referred methodology are not applicable to the project activity as the project activity is not an integrated power project.</p>
	5 (Para 7)	<p>The methodology is not applicable to:</p> <p>(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;</p> <p>(b) Biomass fired power plants/units.</p>	<p>Project is greenfield hydro power plant, hence not applicable.</p>



	6 (Para 8)	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”	Project is greenfield hydro power plant, hence not applicable.
	7 (Para 9)	In addition, the applicability conditions included in the tools referred to below apply <sup>3</sup>	Tool to calculate the emission factor for an electricity system - Version 07.0 (EB 100, Annex 04) have been applied appropriately.
Assessment team confirms that the application of the baseline methodology is transparent and conservative and confirms that the chosen baseline and monitoring methodology i.e. ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0. is applicable to the project activity <sup>7/</sup> .			

### D.3. Validity of original baseline or its update

<b>Means of validation</b>	The baseline scenario as depicted in the updated PDD for renewal of crediting period is checked during document review and also during the interview with the PP.
<b>Findings</b>	No finding was raised during the RCP validation process.
<b>Conclusion</b>	<p>The baseline is selected as per the requirement of the approved methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0<sup>7/</sup>. for the present Crediting period.</p> <p>Assessment team referred “Methodological tool (EB 66, Annex 47) “Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period<sup>9/</sup>.” (Version 03.0.1)” and CDM validation and verification standard for project activities, version 02” to check the originality of the baseline. Following are the observation of the assessment team regarding selected baseline for the project activity in this present second renewable crediting period:</p> <p><u>Step 1.1 (EB 66, Annex 47): Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</u></p> <p>The baseline for the project activity is the electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. The project activity is claiming the emission reductions from the net exported electricity to the grid only. In absence of project activity this quantity of electricity would have been generated from the electricity grid mix (mainly fossil fuel). The Government of India enacted the Electricity Act in the year 2003 to harmonize and rationalize the provisions in the then existing laws. The Act consolidated the laws relating to generation, transmission, distribution, trading and use of electricity. With the Enactment of the act, the then existing laws viz, The Indian Electricity Act 1910,</p>

<sup>3</sup> The condition in “TOOL02: Combined tool to identify the baseline scenario and demonstrate additionality” that all potential alternative scenarios to the proposed project activity must be available options to project participants; does not apply to this methodology, as this methodology only refers to some steps of this tool.

The Electricity Supply Act, 1948 and The Electricity Regulatory Commissions Act, 1998 were repealed. The Electricity Act 2003 was in force at the time of the completion of the baseline study during first crediting period.

The baseline remains unchanged for the present, second crediting period since there is no policy been revised and/or is currently in force as well, therefore the baseline scenario is still in compliance with all the relevant mandatory national and/or sectoral policies.

Step 1.2 (EB 66, Annex 47) : Assess the impact of circumstances

There are no new circumstances that can impact the original baseline. The baseline emission factor value is however updated based on the current data available for the grid.

Step 1.3 (EB 66, Annex 47): Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

As per the “Tool to determine the remaining lifetime of equipment” (Annex 15 EB 50)<sup>9/</sup>, the remaining lifetime of the equipment is the time for which the existing equipment can continue to operate before it has to be replaced/discarded. As per this Tool, Project participant can use one of the following options to determine the remaining lifetime of the equipment:

- a. Use manufacturer’s information on the technical lifetime of equipment and compare to the date of first commissioning;
- b. Obtain an expert evaluation;
- c. Use default value

The project activity started commercial operation in the year 26/09/2015 (Commissioning of first unit) and since commissioning, the project activity is running satisfactorily. As per Manufacturer specification and Registered PDD<sup>3/</sup>, the technical lifetime of project activity is 35 years (As per 1<sup>st</sup> CP). Thus the remaining lifetime of equipment’s exceeds the crediting period for which renewal is requested. Thus as per manufacturers information, the remaining lifetime of equipment is exceeds crediting period as per option 1 of Tool to determine the remaining lifetime of the Equipment.

The below conditions are fulfilled. (i)The equipment has been operated and maintained according to the recommendations of the equipment supplier; (ii) There are no periodic replacement schedules or scheduled replacement practices specific to the industrial facility, that require early replacement of equipment before the expiry of the technical lifetime; and (iii) The equipment has no design fault or defect and did not have any industrial accident due to which the equipment cannot operate at rated performance levels.

An per option (a), evaluating the remaining lifetime for the type of equipment has been approached and requested to determine the remaining lifetime of the equipment. The assessment of remaining life time of the equipment’s had been done and confirmed that the remaining technical lifetime of the equipment of the project activity exceeds the crediting period for which renewal is requested. As the remaining technical lifetime of the equipment is not less than the end of the crediting period or which renewal is requested, the current baseline holds good for this crediting period too.

Step 1.4(EB 66, Annex 47): Assessment of the validity of the data and parameters

This step stipulates that “Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the

	<p>implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity.”</p> <p>The project chosen <b>ex-ante default value i.e. Emission Factor</b>. As per the Guidance given in Tool the emission factor is updated as follows:</p> <ol style="list-style-type: none"> <li>1. The operating margin is calculated as per the latest version of CEA CO<sub>2</sub> Baseline database (Version 14) available to the project participant<sup>14/</sup>. The operating margin calculation is checked by the assessment team and found correct.</li> <li>2. The build margin is considered from CEA CO<sub>2</sub> Baseline database version 14/<sup>14/</sup> as per “Tool to calculate the emission factor for electricity system” version 07/<sup>9/</sup>. The value considered is checked by the assessment team and found correct.</li> <li>3. The Combined margin calculation is carried out as per “Tool to calculate the emission factor for electricity system” version 07/<sup>9/</sup>. The value considered is checked by the assessment team and found correct.</li> </ol> <p>The emission factor is fixed ex-ante and thus will be used for the complete second renewable crediting period and for entire verification conducted under second renewable crediting period.</p> <p><b>Application of Steps 1.1, 1.2, 1.3 and 1.4 confirmed that the current baseline is valid for the Second crediting period but data and parameters needs to be updated. Therefore step 2 is used</b></p> <p><b>Step 2.1: Update the current baseline</b> This step is applicable since the Steps 1.1, 1.2, 1.3 and/or 1.4 showed that the current baseline needs to be updated. As evident from the explanation provided above the baseline scenario remains unchanged.</p> <p>Updated the baseline emissions based on the latest approved version of the methodology applicable to the project activity for the subsequent crediting period, without reassessing the baseline scenario.</p> <p><b>Step 2.2: Update the data and parameters</b> The updated Data and/or parameter are followed for estimating the baseline emissions</p> <p>Hence as per ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0<sup>7/</sup>. (latest Methodology), the baseline of the project is as follows:</p> <p><i>Project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”<sup>9/</sup>.</i></p> <p>The above selected baseline is correct and thus applicable to the project activity and in line with approved methodology for the applied renewable of crediting period.</p>
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#### D.4. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	The emission reduction sheet, CEA CO <sub>2</sub> Baseline database version 14.0/ <sup>14/</sup> (Latest applicable) and updated PDD/ <sup>5/</sup> is checked by the assessment team.
<b>Findings</b>	CAR 05 & CAR 06 was raised and closed successfully.
<b>Conclusion</b>	The baseline emissions as discussed in section B.6.1 will include emissions that would have occurred in the absence of the project activity. The emission reduction

calculation has been done as per the ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0.<sup>7/</sup>.

#### **Baseline Emission (BE<sub>y</sub>):**

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$$

Where

BE<sub>y</sub> = Baseline emissions in year y (tCO<sub>2</sub>/yr)

EG<sub>PJ,y</sub> = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)

EF<sub>grid,CM,y</sub> = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO<sub>2</sub>/MWh)

EG<sub>PJ,y</sub> is Calculated as Installed Capacity x PLF x Operating hours.

PP has estimated the baseline energy generation considering the capacity of the project activity, yearly generation hour and plant load factor. Validation team assessed the technical specification of the promoters of the project activity, Commissioning certificate and found that installed capacity of this project activity is correct<sup>2/</sup>.

Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors according to the procedure prescribed in the "Tool to calculate the emission factor for an electricity system" version 07.0<sup>9/</sup> which is sourced from CEA CO<sub>2</sub> Baseline database version 14.0, Govt. of India<sup>14/</sup> and forms the part of emission reduction calculation<sup>6/</sup>. The baseline emission factor calculation is checked by the validation team and found that the calculation is transparent and conservative.

$$BE_y = 439,587 \times 0.8885 = 390,589 \text{ tCO}_2\text{e}$$

#### **Project Emissions:**

Since, the Power Density greater than 10 W/m<sup>2</sup> therefore project emission is not applicable<sup>3/</sup>.

Further, as per the para 36 of ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0.<sup>7/</sup>, "*for all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected*".

Hence, PE = 0

The project emissions calculation is checked by the validation team and found that the calculations are transparent, conservative and inline with the applied methodology<sup>7/</sup>.

#### **Leakage Emissions:**

As per the Methodology requirement Leakage emission is not applicable for renewable project<sup>7/</sup>.

#### **Emission Reductions:**

	<p>The project activity reduces carbon dioxide emissions through displacement of grid electricity generation with predominantly fossil fuel based power plants<sup>4</sup> by renewable electricity. The emission reduction (ER<sub>y</sub>) due to project activity during a given year y is calculated as the difference between baseline emissions (BE<sub>y</sub>), project emissions (PE<sub>y</sub>) as per the formulae given below:</p> $ER_y = BE_y - PE_y$ $ER_y = 390,589 - 0 \text{ tCO}_{2e}$ $ER_y = 390,589 \text{ (Rounded Down)}$
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### D.5. Validity of monitoring plan

<b>Means of validation</b>	Assessment team checked the monitoring practice onsite and also checked the requirement of ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 20.0 <sup>7/</sup> . and procedure mentioned in the registered PDD of 1 <sup>st</sup> CP <sup>5/</sup> .
<b>Findings</b>	No finding raised on the section.
<b>Conclusion</b>	<p><b><u>Parameters determined ex-ante:</u></b></p> <ol style="list-style-type: none"> <li>1. <b>EF<sub>grid,OM,y</sub> : = (0.9610 tCO<sub>2</sub>/MWh)</b> = Operating Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor for an electricity system version 07<sup>9/</sup>." EF<sub>grid, OM, y</sub> is computed using the Simple Operating margin CO<sub>2</sub> emission factor. Simple Operating margin CO<sub>2</sub> emission factor is calculated from 3-year generation weighted average using data for the years 2015-16, 2016-17 &amp; 2017-18 CO<sub>2</sub> emissions per unit net electricity generation of all power plants serving the system, not including low-cost / must-run. This is in agreement with the guidance provided in the Tool to calculate the emission factor for an electricity system. <b>The value is considered from CEA CO<sub>2</sub> Baseline database version 14<sup>14/</sup>.</b> The value is fixed ex-ante for the entire duration of 2<sup>nd</sup> crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required.</li> <li>2. <b>EF<sub>grid,BM,y</sub> = (0.8644 tCO<sub>2</sub>/MWh)</b> Build Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor version 07 for an electricity system<sup>9/</sup>. Build margin emission factor is the generation-weighted average emission factor of all power plants <i>m</i> during the most recent year y for which generation data is available. <b>The value is considered from CEA CO<sub>2</sub> Baseline database version 14<sup>14/</sup>.</b> The value is fixed ex-ante for the entire duration of 2<sup>nd</sup> crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required</li> <li>3. <b>EF<sub>grid,CM,y</sub> := (0.8885 tCO<sub>2</sub>/MWh)</b> Combined Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor for an electricity system version 07"<sup>9/</sup>. Combined Margin is computed using the official data sources and is in-line with the guidance provided in the tool. <b>The value is considered from CEA CO<sub>2</sub> Baseline database version 14<sup>14/</sup>.</b> The combined margin emissions factor is calculated as follows: <math display="block">EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}</math> <p>Where:</p> <p>EF<sub>grid,BM,y</sub>= Build margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh)</p> <p>EF<sub>grid,OM,y</sub>= Operating margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh)</p> </li> </ol>

$W_{OM}$  = Weighting of operating margin emissions factor (%) = 25%

$W_{BM}$  = Weighting of build margin emissions factor (%) = 75%

The above weighing is as per "Tool to calculate the emission factor for an electricity system", version 07.0.0<sup>/9/</sup> for second crediting period. The value is fixed ex-ante for the entire duration of second crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required.

Assessment team confirms that the ex-ante parameters are taken appropriately as per the applied methodology and source is authentic & values are correct<sup>/7/</sup>.

**Parameters determined ex-post:**

**EG**<sub>facility,y</sub> = Net electricity supplied to the grid by the Project

The net electricity supplied to grid is a calculated value and would be determined as the difference between the electricity exported to the grid and the electricity imported from the grid by the project activity.

The value for the parameter will be sourced from the primary source i.e. metered data at site for net electricity supplied to grid and monthly energy bill for import. The Daily energy meter reading is duly signed by O&M personals at the site. The primary source will be used for emission reduction calculation for the entire duration of second CP. The practice is as per the first CP registered PDD<sup>/3/</sup> and approved methodology<sup>/7/</sup>. The electricity export & import is measured continuously using energy meter installed at the site and the readings are recorded daily by the PP for export meters and by state utility for import meters. The PP prepares invoices on a monthly basis based on the quantity of electricity export to the grid. The monthly data will be considered for calculating the annual net electricity exported to the grid by the project activity during the year y.

A = Surface area of the reservoir at full volume

14.489 hectares = 144,890 m<sup>2</sup> The surface area of the reservoir will vary depending on drawdown of water by the turbines. The area of 14.489 ha is the maximum area of submergence. Same was validated during onsite visit and it was observed that there is no change in reservoir area.

**For export meters:**

Accepted industry standard: National standard as described in the Power Purchase Agreement.

Measurement equipment: Energy meters

Calibration frequency: once in 5 years

Accuracy of the meters: 0.2 class

Measurement interval: continuous measurement, monthly recording

**For import meters:**

Accepted industry standard: State Utility practice.

Measurement equipment: Energy meters

Calibration frequency: State Utilities do not calibrate the import meters and not under the control of the PP

Accuracy of the meters: 0.5 class

Measurement interval: continuous measurement, monthly recording

Details of meters are as follows:

Instrument Name	Location	Serial No.	Make	Accuracy Class
Electronic Trivector Meter	Line 1 Main Meter	NP8762A	Larsen & Toubro	0.2s
Electronic Trivector Meter	Line 1 Check Meter	NP8763A	Larsen & Toubro	0.2s
Electronic	Line 2 Main	NP8764A	Larsen &	0.2s

	Trivector Meter	Meter		Toubro	
	Electronic Trivector Meter	Line 2 Check Meter	NP8765A	Larsen & Toubro	0.2s
The data will be archived electronically for a minimum of two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.					

**D.6. Crediting period**

<b>Means of validation</b>	The crediting period is checked as per UN home page <sup>/12/</sup> (reference number: 1326 and discussion with Client.
<b>Findings</b>	No finding raised on this section.
<b>Conclusion</b>	This is second renewable crediting period and the duration is 7-year renewable (second CP duration: 01/01/2019 to 31/12/2025) <sup>/5/</sup> .

**D.7. Project participants**

<b>Means of validation</b>	The project participant names were checked from UN homepage <sup>/12/</sup> <a href="https://cdm.unfccc.int/Projects/DB/DNV-CUK1188881385.79/view">https://cdm.unfccc.int/Projects/DB/DNV-CUK1188881385.79/view</a>		
<b>Findings</b>	CAR 07 was raised and closed successfully.		
<b>Conclusion</b>	Following are the details of PP (host country) and Annex 1 country. The same is correct and in line with PDD registered under first Crediting period <sup>/3/</sup> as well as MOC obtained from UN home page. The details are true for the second Crediting period as well. Further, CAR 07 was raised for updated MOC, however, as PP stated the existing MOC is valid and there is no change in the MOC.		
	<b>Parties involved</b>	<b>Project participants</b>	<b>Indicate if the Party involved wishes to be considered as project participant (Yes/No)</b>
	India (Host)	M/s M/s. DANS Energy Private Limited Private Entity	No

**D.8. Post-registration changes**

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents <sup>5</sup>	N	NA	NA
Corrections	N	NA	NA
Change to the start date of the crediting period	N	NA	NA
Inclusion of a monitoring plan	N	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	N	NA	NA
Changes to the project design	N	NA	NA
Changes specific to afforestation and reforestation project activities	N	NA	NA

<sup>5</sup> Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

## **SECTION E. Internal quality control**

The draft validation report that is prepared by validation team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope to which the project activity is related. All members of technical review team are independent of the validation team.

During the technical review process, additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for the renewal of the crediting period is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same, in such case, providing the comments/findings/issues that needs to be resolved by the validation team. The decision taken by the technical reviewer is final and is authorized on behalf of ESPL.

## **SECTION F. Validation opinion**

ESPL, contracted by DANS Energy Private Limited, has performed the independent validation of the renewal of crediting period of the project<sup>/1/</sup> “Jorethang Loop Hydroelectric Project, India”.

ESPL commenced the validation based on the baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0.<sup>/7/</sup>, the registered PDD<sup>/3/</sup> (from previous crediting period) and updated PDD<sup>/5/</sup> (for the second crediting period).

ESPL's validation approach is based on the understanding of the risks associated with reporting the project activity, estimates of GHG emission data and the controls to be implemented to mitigate these. ESPL planned and performed the validation by obtaining evidence, other information and explanations that ESPL considered necessary to give reasonable assurance that the estimated GHG emission reductions are fairly to be achieved.

The validation team confirms, based on final version of revised PDD for the second crediting period, that:

- the original baseline is still valid as it is given by the applied methodology;
- the project additionality is valid for the renewal of the crediting period. No regulatory surplus has been identified. The project is in accordance with all applicable regulations and legislations;
- the project description is in accordance with the characteristics identified on site;
- the monitoring plan is adequate to the project activity and it is in accordance with the applied methodology;
- at this second crediting period, the project activity is likely to achieve the estimated of 390,589 tCO<sub>2</sub>e per year.



## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CMS	Central Monitoring system
CP	Crediting period
CM	Combined Margin
CMS	Central Monitoring system
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
ER	External Resource
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
IR	Internal Resource
OR	Outside resource
OEM	Original Equipment manufacturer
OM	Operating Margin
PP	Project Participant
RCP	Renewal of Crediting Period

## Appendix 2. Competence of team members and technical reviewers

Competence Statement			
<b>Name</b>	Atul Takarkhede		
<b>Education</b>	Ph.D. Environmental Science		
<b>Experience</b>	12 years		
<b>Field</b>	Climate Change and environment		
Approved Roles			
<b>Team Leader</b>	YES		
<b>Validator</b>	NO		
<b>Verifier</b>	NO		
<b>Methodology Expert</b>	NO		
<b>Local expert</b>	NO		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	NO		
<b>TA Expert</b>	YES (1.2)		
<b>Reviewed by</b>	Shreya Garg	<b>Date</b>	24/04/2019
<b>Approved by</b>	Anshika Gupta	<b>Date</b>	25/04/2019

Competence Statement			
<b>Name</b>	Shreya Garg		
<b>Country</b>	India		
<b>Education</b>	M.Sc. (Climate Science & Policy), TERI University		
<b>Experience</b>	6 Years +		
<b>Field</b>	Climate Change		
Approved Roles			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Methodology Expert</b>	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
<b>Local expert</b>	YES (India)		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert</b>	YES (TA 1.2, TA 3.1)		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	01/03/2018
<b>Approved by</b>	Ashok Gautam	<b>Date</b>	01/03/2018

Competence Statement	
<b>Name</b>	Anshika Gupta
<b>Country</b>	India

<b>Education</b>	M.Sc. (Climate Science & Policy), TERI University		
<b>Experience</b>	4 Years +		
<b>Field</b>	Climate Change		
<b>Approved Roles</b>			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Methodology Expert</b>	AMS-I.A., AMS-II.G., ACM0002, AMS-III.A.V.		
<b>Local expert</b>	YES (India)		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert</b>	Yes (TA 1.2, TA 3.1)		
<b>Reviewed by</b>	Shreya Garg	<b>Date</b>	12/03/2019
<b>Approved by</b>	Kaviraj Singh	<b>Date</b>	12/03/2019

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	ESPL	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
2.	EASTERN REGIONAL POWER COMMITTEE	Commissioning Certificates for plant (Statement of Deviation Charges including Additional Deviation Charges & RRAS Settlement Account for the period from 18.04.2016 to 24.04.2016)	Declared Commissioning on 26/09/2015 & 01/10/2015 (ERPC Letter NO: ERPC/COM-II/ABT-DC/2016/ Dated: 06.05.2016)	Project participant
3.	M/s DANS Energy Private Limited	Registered CDM PDD for first crediting period  Revised PDD for PRC-1326-001 was approved on 16/09/2016.	Version NA dated 28/12/2007  Version 04 dated 16/06/2016	Other
4.	DNV  EPIC	Validation Report for first crediting period (Report No. 2006-9147)  Validation Report for PRC-1326-001 by EPIC	Version 01 dated 01/08/2007  Version 1.0 dated 28/06/2016	Other
5.	M/s DANS Energy Private Limited	Draft Updated PDD for Renewal of Crediting Period  Final updated PDD for Renewal of Crediting Period	Version 05 dated 18/07/2019  Version 06 dated 16/11/2019	Project participant
6.	M/s DANS Energy Private Limited	Estimated Emission reduction calculation sheet	Version 01 dated 18/07/2019	Project participant
7.	UNFCCC	ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0.	UNFCCC CDM web site	M/s DANS Energy Private Limited
8.	MoEFCC  UNFCCC  CEA	Ministry of Environment and forest: <a href="http://www.envfor.nic.in">www.envfor.nic.in</a>  UNFCCC <a href="http://www.cdm.unfccc.int">www.cdm.unfccc.int</a>  CEA: Central electricity authority <a href="http://www.cea.nic.in">www.cea.nic.in</a>	Reference link is provided.	Other
9.	UNFCCC	Tools/ guidelines used in the project activity: <ul style="list-style-type: none"> <li>Clarification on national and/or sectoral policies Para 27 EB 55.</li> <li>Tool to determine the remaining lifetime of the project activity in line with Annex 15 EB 50.</li> <li>Tool to calculate project or leakage</li> </ul>	UNFCCC CDM web site	Other

No.	Author	Title	References to the document	Provider
		<p>CO<sub>2</sub> emissions from fossil fuel combustion, Version 3.</p> <ul style="list-style-type: none"> <li>• Tool to calculate the emission factor for an electricity system version 07.</li> <li>• Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period.” (Version 03.0.1).</li> </ul>		
10.	M/s DANS Energy Private Limited & Haryana Power Purchase Centre	Latest Power Purchase Agreements for the project activity	09/05/2018	Project participant
11.	M/s DANS Energy Private Limited	Sample Daily Generation Report for the plant	NA	Project participant
12.	UNFCCC	<p>UNFCCC CDM webpage for Project activity 1326</p> <p><a href="https://cdm.unfccc.int/Projects/DB/DNV-CUK1188881385.79/view">https://cdm.unfccc.int/Projects/DB/DNV-CUK1188881385.79/view</a></p>	NA	Other
13.	UNFCCC	PDD-FORM template	Version 11.0	Other
14.	CEA	CEA CO <sub>2</sub> Baseline database	Version 14	Other

## Appendix 4. Clarification requests, corrective action requests and forward action requests

**Table 1. Remaining FAR from validation and/or previous verification**

<b>FAR ID</b>	01	<b>Section no.</b>	NA	<b>Date :</b> 07/11/2019
<b>Description of FAR</b>				
<i>There is no FAR from the validation/previous verifications of the project activity</i>				
<b>Project participant response</b>				<b>Date :</b> DD/MM/YYYY
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY
NA				

**Table 2. CL from this verification**

<b>CL ID</b>	02	<b>Section no.</b>	D.1	<b>Date :</b> 16/10/2019
<b>Description of CL</b>				
<i>PP requested to submit commissioning certificates and PPA for the project activity.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>The Commissioning Certificates and PPA is now provided to the DOE for further assessment.</i>				
<b>Documentation provided by project participant</b>				
1. Commissioning Certificates 2. PPA				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
PP has submitted commissioning certificate for the project activity and the dates of commissioning mentioned in PDD are correct. Further, PP has submitted copy of the PPA and found inline with the details provided in updated PDD for RCP. CL closed.				

**Table 3. CAR from this verification**

<b>CAR ID</b>	03	<b>Section no.</b>	D.1	<b>Date :</b> 16/10/2019
<b>Description of CAR</b>				
<i>PP requested to provide exact Geo-coordinates of the project activity in DMS format.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>The exact Geo-coordinates of the project activity has been updated in section A.2 of the Revised RCP PDD version 06 now provided to the DOE for further assessment.</i>				
<b>Documentation provided by project participant</b>				
PDD version 06				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
Exact geo-coordinates of the power plant are now updated in the updated PDD and found line with onsite observations taken. CAR closed.				

<b>CAR ID</b>	04	<b>Section no.</b>	D.1	<b>Date :</b> 16/10/2019
<b>Description of CAR</b>				
<i>Reference to the tool to demonstrate additionality is not matching with registered PDD as the re-assessment of additionality is not carried out for the project activity. Corrections requested.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>The reference to the tool to demonstrate additionality is now been updated as was mentioned in the registered PDD as the re-assessment of additionality has not been carried out. The corrected RCP PDD version 06 is now provided to the DOE for further assessment.</i>				
<b>Documentation provided by project participant</b>				
PDD version 06				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
Revised PDD is now corrected appropriately for the reference of the additionality tool. CAR closed.				

<b>CAR ID</b>	05	<b>Section no.</b>	D.4	<b>Date :</b> 16/10/2019
<b>Description of CAR</b>				
<i>Project emissions due to diesel consumption are neglected inline with para 36 of applied meth. Revision in methodological choices and parameters monitored requested. PP requested to submit revised ER estimation sheet accordingly.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>The parameters for Project Emission due to diesel consumption is now neglected in section B.6.1 and Section B.7.1 of PDD version 06 now provide to the DOE for further assessment.</i>				
<b>Documentation provided by project participant</b>				
<i>PDD Version 06</i>				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
<i>Project emissions due to diesel consumption are now neglected with justification and methodological choices are inline with the applied methodology. CAR closed.</i>				

<b>CAR ID</b>	06	<b>Section no.</b>	D.4	<b>Date :</b> 16/10/2019
<b>Description of CAR</b>				
<i>Correlation between <math>EG_{PJ,y}</math> and <math>EG_{facility,y}</math> is missing in the PDD.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>The Correlation between <math>EG_{PJ,y}</math> and <math>EG_{facility,y}</math> is now included in section B.6.1 of PDD version 06 now provided to the DOE for further assessment.</i>				
<b>Documentation provided by project participant</b>				
<i>PDD Version 06</i>				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
<i>Correlation between <math>EG_{PJ,y}</math> and <math>EG_{facility,y}</math> is now established in PDD. CAR closed.</i>				

<b>CAR ID</b>	07	<b>Section no.</b>	D.7	<b>Date :</b> 16/10/2019
<b>Description of CAR</b>				
<i>PP requested to submit updated MOC for the project activity.</i>				
<b>Project participant response</b>				<b>Date :</b> 16/11/2019
<i>There has been no change to the MOC available on UNFCCC Project page and hence, no updation is required.</i>				
<b>Documentation provided by project participant</b>				
-				
<b>DOE assessment</b>				<b>Date:</b> 18/11/2019
<i>As there is no change in MOC, same accepted by assessment team. CAR closed.</i>				

Table 4. FAR from this verification

<b>FAR ID</b>	08	<b>Section No.</b>		<b>Date :</b> DD/MM/YYYY
<b>Description of FAR</b>				
<i>There is no FAR from this verification</i>				
<b>Project participant response</b>				<b>Date :</b> DD/MM/YYYY
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY
NA				

- - - - -

**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"><li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN) and version 02.0 of the “CDM project cycle procedure for project activities” (CDM-EB93-A06-PROC);</li><li>• Make editorial improvements.</li></ul>
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
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