




**Validation report form for renewal of CDM programme of activities period  
(Version 02.0)**

*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 programme of activities (PoA)</b>	Tunki Small Scale Hydropower Program of Activities (UNFCCC reference number: 6198) <sup>1</sup>
<b>Number and duration of the next period</b>	2 <sup>nd</sup> renewal crediting period : (28/06/2019 to 27/06/2026)
<b>Version number of the validation report</b>	01
<b>Completion date of the validation report</b>	04/12/2019
<b>Version number of PoA-DD to which this report applies</b>	07
<b>Coordinating/managing entity (CME)</b>	Carbonbay GmbH & Co. KG
<b>Host Parties</b>	<b>Peru</b>
<b>Applied methodologies and standardized baselines</b>	Methodology AMS-I.D. ver 18 <sup>2</sup> – Grid connected renewable electricity generation Standardized Baseline: Not Applicable
<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 programme of activities period</b>	82,851tCO <sub>2e</sub>
<b>Name and UNFCCC reference number of the DOE</b>	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032
<b>Name, position and signature of the approver of the validation report</b>	Mr. Juan Sendín Caballero Applus+ Certification Business Unit Managing Director Signature: 

<sup>1</sup> [https://cdm.unfccc.int/ProgrammeOfActivities/poa\\_db/8J56SG0WRNM7LZIUPC3DAYQXKBFEV1/view](https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/8J56SG0WRNM7LZIUPC3DAYQXKBFEV1/view)

<sup>2</sup> <https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK>

## SECTION A. Executive summary

The Tunki Small Scale Hydropower Program of Activities aims at developing a series of grid connected small hydroelectric projects in Peru.

### 1. General operating and implementing framework of PoA:

The Tunki PoA supports the development of new small-scale hydropower projects in Peru connected to the Peruvian National Electricity Grid (SEIN). Each small-scale CDM Program Activity (referred to later on as CPA) under this PoA comprises one or more hydropower plan projects having a combined installed capacity of no more than 15 MW in the case of new facilities or a capacity addition, replacement or retrofit of no more than 15 MW for the total plant capacity in the case of existing facilities, considering the threshold for small-scale CDM projects. This PoA is a voluntary action being coordinated and managed by Carbonbay GmbH & Co. KG. (Referred later on as Carbonbay or the coordinating/managing entity - CME). Carbonbay works closely with the developers of the hydropower plants (CPA owners) and other organizations active in the hydropower sector in the host country to facilitate the development of new power plants and their inclusion in this PoA.

### 2. Policy/measure or stated goal of the PoA

The objective of this PoA is to develop a platform for overcoming institutional, financial and structural hurdles for the construction of a series of small hydroelectric power plants projects or increase the generation capacity of exiting power plants. All projects are small scale new grid connected hydropower facilities which allows the National Electric Power Grid (SEIN, Sistema Interconectado Nacional) to maintain in stand-by or delay the development of new thermal power plants, thus displacing expensive generation fuelled by heavy fuel oil, diesel, coal or natural gas, while reducing GHG emissions and increasing the amount of energy available on the grid. Then, the baseline scenario is that the 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 into the grid.

**Validation Scope:** The scope is defined as an independent and objective review of the project design document (POA-DD). The POA-DD 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 AMS-I.D version 18. The validation was based on the requirements in the CDM validation and verification standard for programm of 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.

**Validation Process:** The project assessment is based on the “CDM validation and verification standard for programm of activities, version 02 and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM project activity are appointed.

Once the project is made available for the global stakeholder consultation process, the members of the assessment team carried out:

- I A desk review of the project design documentation;
- II Follow-up interviews with project stakeholders;
- III The resolution of outstanding issues and the issuance of the final validation report and opinion.

The prepared validation report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the CDM-EB.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific Checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

**Appointment of the assessment team**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of Applus+ Certification.

The composition of audit team shall be approved by Applus+ Certification ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Sukanta Das	LA/TE	YES	YES	YES	YES
Mr. Simon Shen	TR	YES	YES	YES	NA

The complete list of CVs is included as Appendix 2 of this report.

**Document review**

The Project Design Document submitted by the Client was reviewed against the approved methodology and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources like 3<sup>rd</sup> party Government documents has been done. A complete list of all documents and evidence material reviewed is included in Appendix 3 of this report.

**Follow-up interviews**

Applus+ Certification performed interviews, telephone conferences, and physical site inspection with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in section C.2 and C.3 of this report.

**Resolution of Clarification and Corrective Action Request**

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the validation process, the concerns raised and responses given are summarized in Appendix 4 below.

The final PDD version 07 submitted by PP on 27/11/2019 serves as the basis for the final assessment presented. Additional changes to the project during the validation process are not considered to be significant with respect to the main CDM objectives. The two CDM main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

**Internal quality control**

As final step of a validation of the final documentation including the validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of interest.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

**Conclusion**

Applus+ Certification has performed a validation of the “Tunki Small Scale Hydropower Program of Activities”. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. AMS-I.D version 18, given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

Applus+ Certification has received a confirmation from the host Party that the project activity assists it in achieving sustainable development.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO<sub>2e</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the positive list of renewable project demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 82,851tCO<sub>2e</sub>.

The validation has been performed following the requirements of the latest version of the CDM validation and verification standard for programme of activities, version 02 and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.

**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.	Lead Auditor/ Technical Expert	O R	DAS	SUKANTA	True Quality Certifications Private Limited- Outsourced entity	YE S	YE S	YE S	YE S

**B.2. Technical reviewer and approver of the validation report for renewal of PoA period**

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	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Sendín Caballero	Juan	Applus+ Certification

## SECTION C. Means of validation

### C.1. Desk/document review

The details of the document observed during desk review /validation process are listed below in Appendix 3 of this report.

### C.2. On-site inspection

**As per the requirement of Para 183 of** CDM validation and verification standard for programm of activities, version 02 , Para (a) since the emission reduction estimated is less than 100,000 tCO<sub>2eq</sub>, assessment team didn't conducted site visit for 2<sup>nd</sup> renewal of registered POA (UNFCCC reference number: 6198). To validate the POA design, eligibility creteria CPA to be included, monitoring & management practices as mentioned in the PoA-DD; assessment team has conducted telephonic interviews with CME. After telephonic interviews with concerned CME person; assessment team concluded that the design PoA is same as envisaged in 1<sup>st</sup> CP. There is no change in the eligibility of PoA design or operation and monitoring practices as mentioned in the registered PoA of 1<sup>st</sup> CP which can alter the applicability or additionality of the project activity/methodology applied i.e. AMS.I.D version 18. Assessment team therefore of the opinion that project is will be implemented as described in the registered PoA- DD for 1st crediting period and no change is envisaged for the proposed 2nd crediting period.

No.	Activity performed on-site	Site location	Date	Team member
NA	NA	NA	NA	NA

### C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Brückner	Wolfgang	Managing Director- Carbonbay GmbH & Co. KG <sup>3</sup>	05/11/2019	POA design, monitoring & management practices of the PoA DD, eligibility creteria CPA to be included etc	Mr. Sukanta Das

### C.4. Sampling approach

The assessment team did not apply any sampling approach for the PoA-DD assessment.

### 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
<b>Programme of activities</b>			
Compliance with PoA-DD form	00	00	00
Programme of activities period	00	00	00
Coordinating/managing entity and the project participants	00	00	00
Post-registration changes	00	00	00
<b>Generic component project activities</b>			
Application and selection of methodologies and standardized baselines	00	01	00
Validity of original baseline or its update	00	01	00
Estimated emission reductions or net anthropogenic removals	00	01	00
Validity of monitoring plan	00	00	00
Eligibility criteria for inclusion of CPAs	00	01	00
Others (please specify)	00	00	00
<b>Total</b>	00	04	00

<sup>3</sup> Telephonic interview only.

**SECTION D. Validation findings****D.1. Programme of activities****D.1.1. Compliance with PoA-DD form**

<b>Means of validation</b>	Assessment team checked the PoA DD version 09.0 form 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>	No findings raised for the section
<b>Conclusion</b>	<p>The information transferred to the version 09 of the PoA-DD form is materially the same as that in the registered PoA-DD of 1<sup>st</sup> crediting period. All CPAs under the PoA is small run-off-river hydro power plants with an installed capacity below or equal to 15 MW or hydro power plants with a capacity additions/retrofitting/replacement that not exceed 15 MW for the total final capacity of the facility, connecting to the Peruvian national electricity grid. Though, detailed technical characteristics differ, the following general conditions apply for all CPAs:</p> <ul style="list-style-type: none"> <li>• The projects can be run-of-the-river with no more than a control reservoir, if any.</li> <li>• Projects can result in new reservoirs or an increment in an existing one if the methodology conditions are fulfilled.</li> <li>• Water is diverted to the power plant through the most environmentally friendly alternative viable while ensuring a minimum ecological flow according to national regulations.</li> <li>• The water is conducted through a penstock to the powerhouse.</li> <li>• One or more turbines and suitable generator(s) are located in one or more power houses.</li> <li>• The facility supplies electricity to the electricity grid and, if applicable, to specific consumers.</li> <li>• A discharge channel returns the water to the natural riverbed or water channel.</li> </ul> <p>The proposed PoA is a Sectoral scope 1 programme (Energy industries, renewable - / non- renewable sources).</p>

**D.1.2. Programme of activities period**

<b>Means of validation</b>	Assessment team checked the PoA DD version 09.0 form supplied by the project participant and found that the period as mentioned in the 2 <sup>nd</sup> renewal CP is correct.
	The crediting period is checked as per UN home page (reference number : 6198) and discussion with Client.
<b>Findings</b>	No findings raised for the section
<b>Conclusion</b>	This is 2 <sup>nd</sup> renewable crediting period and the duration is 7-year renewable (28/06/2019 to 27/06/2026)

**D.1.3. Coordinating/managing entity and the project participants**

<b>Means of validation</b>	The CME and PP names were checked from UN homepage <a href="https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/8J56SG0WRNM7LZIUPC3DAYQXKBFEV1/view">https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/8J56SG0WRNM7LZIUPC3DAYQXKBFEV1/view</a>		
<b>Findings</b>	No findings raised for the section		
<b>Conclusion</b>	Coordinating/Managing Entity	Carbonbay GmbH & Co. KG	
	No change is envisaged from 2 <sup>nd</sup> CP as the CME is same as in 1 <sup>st</sup> CP and registered PoA.		
	Assessment team also confirmed that the PP name is correct as mentioned in the 1 <sup>st</sup> CP. The detail are as below:		

	Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
	Peru (host)	Ecoresources Carbono S.A.C	No
	Germany	Carbonbay GmbH & Co. KG.	No
	Sweden	Swedish Energy Agency	No

#### D.1.4. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Corrections	N	NA	NA
Inclusion of 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 programme design	N	NA	NA
Addition of CPA inclusion template	N	NA	NA
Changes specific to afforestation and reforestation activities	N	NA	NA
Change of coordinating/managing entity	N	NA	NA

#### D.2. Generic component project activities

##### D.2.1. Application and selection of methodologies and standardized baselines

<b>Means of validation</b>	<p>The assessment team has validated the documentation referred to in the revised PoA-DD for renewable of crediting period and verified the documentation content for verifying the justification of the applicability of the methodology AMS-I.D version 18 and confirmed that the documentation referred to in the PoA-DD is correctly quoted and interpreted.</p> <p>Moreover, assessment team have the applied following alternate route to confirm the detail as mentioned in the PoA-DD applied for renewable.</p> <ul style="list-style-type: none"><li>- Interview with the concerned person(CME) mentioned in this report</li></ul> <p>The assessment of the project's compliance with the applicability criteria of AMS-I.D version 18 are documented in detail in section I.1 of the PoA DD</p>			
<b>Findings</b>	CAR 01 was raised during the validation process and closed successfully.			
<b>Conclusion</b>	<p>The applied baseline methodology is justified as it has been demonstrated that the proposed project activity is:</p> <table><tr><td>Applicability of methodologies and standardized baselines. The applicability criteria of AMS I.D. version 18 are the following:</td><td>Methodology AMS I.D. version 18 is applicable to an generic CPA under the proposed PoA because:</td></tr></table>		Applicability of methodologies and standardized baselines. The applicability criteria of AMS I.D. version 18 are the following:	Methodology AMS I.D. version 18 is applicable to an generic CPA under the proposed PoA because:
Applicability of methodologies and standardized baselines. The applicability criteria of AMS I.D. version 18 are the following:	Methodology AMS I.D. version 18 is applicable to an generic CPA under the proposed PoA because:			



	<p>This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>(a) Supplying electricity to a national or a regional grid; or</p> <p>(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as</p>	<p>Assessment team checked that a CPA consists of a renewable energy generation unit (hydro) that supplies electricity and displaces electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit (thermal power plants connected to the national grid).</p>
	<p>Illustration of respective situations under which each of the methodology (i.e. "AMS-I.D.: Grid connected renewable electricity generation", "AMS-I.F.: Renewable electricity generation for captive use and mini-grid" and "AMS-I.A.: Electricity generation by the user) applies is included in the appendix.</p>	<p>CPA installs a new power plant, therefore the methodology AMS-I.D is applicable as per the same.</p>
	<p>This methodology is applicable to project activities that (a) install a (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).</p>	<p>A new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity. However, the CPAs fall under options (a), (b), (c) and (d).</p>
	<p>Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</p> <p>b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m<sup>2</sup>;</p> <p>C) The project activity results in new reservoirs and the power density of the power plant, as per definition given in the Project Emission section, is greater than 4 W/m<sup>2</sup>.</p>	<p>All CPAs for the Tunki PoA comply with conditions (a), (b) and (c). In case of the existence of reservoirs the power density is greater than 4 W/m<sup>2</sup>.</p>
	<p>If the unit added has both renewable and non- renewable components (e.g. a wind/diesel unit), the eligibility limit of 15MW for a small scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel<sup>4</sup> the capacity of the entire unit shall not exceed the limit of 15MW.</p>	<p>Each CPA does only have renewable components and the capacity of the unit shall not exceed the limit of 15 MW.</p>

<sup>4</sup> Co-fired system uses both fossil and renewable fuels.

	Combined heat and power (co-generation) systems are not eligible under this category.	Not applicable, the proposed PoA does not include combined heat and power systems.
	In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct <sup>5</sup> from the existing units.	In the case of CPAs including capacity additions, added units represent no more than 15 MW of power generation capacity and are physically distinct from the existing units.
	In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	In the case of CPAs including retrofits or modifications, the total installed capacity of each CPA does not exceed the limit of 15 MW.
	In the specific case of biomass project activities the applicability of the methodology is limited to either project activities that use biomass residues only or biomass from dedicated plantations complying with the applicability conditions of AM0042.	Not applicable because the proposed PoA is limited to hydropower plants.
	In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.	Not applicable because the proposed PoA is limited to hydropower plants.
	In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply. The scrapping of replaced equipment should be documented and independently verified.	Not applicable because the proposed PoA is limited to hydropower plants.

### D.2.2. Validity of original baseline or its update

<b>Means of validation</b>	The baseline scenario as depicted in the PoA-DD version 07 is checked during the validation site visit and also during the interview with the plant official.
<b>Findings</b>	CAR 02 was raised during the validation process and closed successfully
<b>Conclusion</b>	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." (Version 03.0.1)" and CDM validation and verification standard for program 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 2 <sup>nd</sup> renewable crediting period:

<sup>5</sup> Physically distinct units are those that are capable of generating electricity without the operation of existing units, and that do not directly affect the mechanical, thermal, or electrical characteristics of the existing facility. For example, the addition of a steam turbine to an existing combustion turbine to create a combined cycle unit would not be considered "physically distinct".

Step 1.1 (EB 66, Annex 47): Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

The baseline scenario identified at the validation of the CDM PoA was the electricity delivered to the grid by the PoA, would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. Thus this PoA was a voluntary investment which intends to replace equivalent amount of electricity at grid from renewable source. The CME was not bound to incur this investment; hence absence of project activity (i.e. the investment) does not lead to any continued baseline practice for CME within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid. Hence, the same baseline as identified in the previous crediting period is still valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under CDM.

Notwithstanding the impressive growth of Peruvian electricity sector, there are enormous scope of further improvements in projects those lead to GHGs emission reductions. As per International Renewable Energy Agency (IRENA), the Peruvian electricity mix is diversified, clean and of low cost. It consists of 54% renewable energy and 46% conventional energy. The current policies promote social inclusion, which has led to 92% of access to electricity and the current policy goal is to reach 99% of connectivity in 2019, by implementing a program to install 500.000 solar panel systems in rural areas. Peru aims to continue developing towards a low carbon energy mix, therefore for 2025 it has determined a new objective of 60% renewable energy and 40% gas in the electricity mix, securing access to electricity for the whole population. Hence, there exists scope for reducing the CO<sub>2</sub> emissions in the country by increased use of renewable energy sources including hydroelectric energy.

Furthermore, the CME has considered latest available data (2018) of the Committee on Economic Operation of the Electric System (COES) regarding annually public information of plants/ units generation and fossil fuel consumption in the Peruvian National Inter-connected Grid (SEIN) at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances.

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

Assessment team confirm that this PoA was a voluntary investment which intends to replace equivalent amount of electricity at grid from renewable source. The CME was not bound to incur this investment; hence absence of project activity (i.e. the investment) does not lead to any continued baseline practice for CME within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid. Hence, the same baseline as identified in the previous crediting period is still valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under CDM.

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

	<p>on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM PoA.”</p> <p>The project chosen <b>ex-post 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 Tool to calculate emission factor version 07 available to the project participant. The operating margin calculation is checked by the assessment team and found correct.</li> <li>2. The build margin is calculated from “Tool to calculate the emission factor for electricity system” version 07. 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. The value considered is checked by the assessment team and found correct</li> </ol> <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> 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 AMS-I.D version 18 (latest Methodology), the baseline of the project is as follows: <i>“The baseline scenario is that the 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 into the grid.”</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.2.3. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	The emission reduction sheet version 01 dated 04/12/2019, Tool to calculate the emission reduction version 07, Grid emission factor version 01 dated 04/12/2019 and PoA-DD version 07 is checked by the assessment team.
<b>Findings</b>	CAR 03 was raised during the validation process and closed successfully
<b>Conclusion</b>	The CPAs uses the AMS I.D. “Grid connected renewable electricity generation” version 18 as methodology for the emission reduction calculation. In accordance with the methodology, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources. In order to calculate the grid emission factor, required by the methodology, the “Tool to calculate the emission factor for an electricity system” version 7.0 is used. The

grid emission factor is updated by the coordinating/managing entity every year to consider the electricity system variations. This updated grid emission factor is available for CPA owners in order to estimate their periodical emission reductions.

Every CPA has to determine its condition as new power plant or retrofit/replacement/capacity addition power plant. For the determination of the electricity displaced from the electricity grid, new projects apply paragraph 11 and capacity additions/retrofits/replacements paragraph 15. The CPAs apply paragraph 12 for the determination of the grid emission factor.

Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA:

All CPAs needs to monitor information in order to apply the formulas applicable for the calculation of the emission reductions attributable to the project operation (Grid emission factor and net electricity generation). In the other project types, the historic generation information and its standard deviation has to be determined and used as fixed value during the project crediting period.

The PoA applies the options listed in the methodology for new projects and for capacity additions, rehabilitations and retrofitting cases. The formulas and considerations are listed below.

#### PROJECT EMISSIONS (PE<sub>y</sub>)

According to the methodology, project emissions are related to the operation of geothermal power plants, water reservoirs or on-site consumption of fossil fuels. Since the CPAs are not geothermal power plant or consumes fossil fuels, but may have reservoirs, the project emissions are:

Power plants with no reservoirs

Project emissions are considered zero.

$$PE_y = 0$$

Power plants with new reservoirs or that result in the increase of an existing one

Project emissions have to be considered following the procedure described in the most recent version of ACM0002 that is 19.0. And account for CH<sub>4</sub> and CO<sub>2</sub> emissions from the reservoir, estimated as follows:

If the power density of the project activity (PD) is greater than 4 W/m<sup>2</sup> and less than or equal to 10 W/m<sup>2</sup>:

PEHP,<sub>y</sub>

$$PD = \frac{Cap_{PJ} - Cap_{RL}}{A_{PJ} - A_{RL}}$$

Where:

PEHP,<sub>y</sub>: Project emissions from water reservoirs (tCO<sub>2</sub>e/yr)

EFRes : Default emission factor for emissions from reservoirs of hydro power plants in year y (90 kgCO<sub>2</sub>e/MWh)

TEG<sub>y</sub> :Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh)

If the power density of the project activity (PD) is greater than 10 W/m<sup>2</sup>:

$$PEHP_y = 0$$

The power density of a project activity (PD) is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

Where:

PD : Power density of the project activity (W/m<sup>2</sup>)

CapPJ : Installed capacity of the hydro power plant after the implementation of the project activity (W)

CapBL : Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero

APJ : Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m<sup>2</sup>)

ABL : Area of the reservoir measured in the surface of the water, before the implementation

of the project activity, when the reservoir is full (m<sup>2</sup>). For new reservoirs, this value is zero

Baseline EMISSIONS (BE<sub>y</sub>)

### New Power Plants/Units

The following equation is used to calculate baseline emissions from electricity generation for a CPA implementing a new power plant:

$$BE_y = EG_{BL,y} * EFCO2,grid,y$$

Where:

BE<sub>y</sub> : Baseline emissions from electricity generation in year y (tCO<sub>2</sub>)

EG<sub>BL,y</sub> : Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

EFCO<sub>2,grid,y</sub> : CO<sub>2</sub> emission factor of the grid in year y (tCO<sub>2</sub>/MWh)

### Capacity Addition/Retrofit/Replacement Projects

#### a) Capacity Addition

The following equation is used to calculate baseline emissions from electricity generation for a CPA implementing a capacity addition power plant:

$$BE_{capacity\ addition,CO2,y} = [EG_{BL, capacity\ addition,y}] * EFCO2$$

Where:

$$EGBL, capacity\ addition,y = EGPJ, facility,y - (EG_{historical} + \sigma_{historical})$$

#### b) Retrofit/Replacement

The following equation is used to calculate baseline emissions from electricity generation for a CPA implementing a retrofitting project:

$$BE_{retrofit,CO2,y} = [EGBL,retrofit,y] * EFCO2$$

$$EGBL,retrofit,y = EGPJ, facility,y - (EG_{historical} + \sigma_{historical})$$

$$EGBL,retrofit,y = 0 \text{ on / after DATE}_{BaselineRretrofit}$$

In cases b.1. and b.2. the description of the parameters are:

EG<sub>BL, capacity addition,y</sub> : Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

EGBL retrofit , y : Quantity of net electricity supplied to the grid as a result

	<p>of the implementation of the CDM project activity in year y (MWh)</p> <p>EGPJ,facility,y : Quantity of net electricity supplied to the grid by the project plant/unit in year y (MWh).</p> <p>EGhistorical : Annual average historical net electricity generation by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh). Average of historical net electrical energy levels delivered by the existing facility, spanning all data from the most recent available year (or month, week or other time period) to the time at which the facility was constructed, retrofit, or modified in a manner that significantly affected output (i.e. by 5% or more), shall be used.</p> <p>To determine historical EGhistorical , project participants may choose between the following two historical periods (This allows some flexibility; the use of the longer time period may result in a lower standard deviation and the use of the shorter period may allow a better reflection of the (technical) circumstances observed during the more recent years):</p> <p>The three last calendar years (five calendar years for hydro project) prior to the project implementation.</p> <p>The time period from the calendar year following DATEhist, up to the last calendar year prior to the implementation of the project, as long as this time span includes at least three calendar years (five calendar years for hydro project), where DATEhist is latest point in time between:</p> <ul style="list-style-type: none"> <li>• The commercial commissioning of the plant/unit;</li> <li>• If applicable: the last capacity addition to the plant/unit; or</li> <li>• If applicable: the last retrofit of the plant/unit</li> </ul> <p>ohistorical : Standard deviation of the annual average historical net electricity supplied to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh)</p> <p>DATE Baseline Retrofit : Point in time when the existing equipment would need to be replaced in the absence of the project activity (date)</p> <p><b>Grid Emission Factor</b></p> <p>To calculate the emission factor of the grid, two options are possible according to AMS I.D. "Grid connected renewable electricity generation", version 18:</p> <p>A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the Emission Factor for an electricity system' version 07 EB 100 Annex 4.</p> <p>Or</p> <p>The weighted average emissions (in kg CO<sub>2</sub>e/kWh) of the current generation mix. The data of the year in which project generation occurs must be used. Calculations must be based on data from an official source (where available) and made publicly available.</p> <p>For all CPAs under this PoA option (a) is used for calculating the baseline. Data used to calculate the emission factors has been included in Annex 3 of this document.</p> <p>The emission factor is determined according to the procedures prescribed in the "Tool to calculate the emission factor for an electricity system" version 07.0 following six steps:</p>
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STEP 1. Identify the relevant electricity systems.  
 STEP 2. Choose whether to include off-grid power plants in the project electricity system (optional).  
 STEP 3. Select a method to determine the operating margin (OM).  
 STEP 4. Calculate the operating margin emission factor according to the selected method.  
 STEP 5. Calculate the build margin emission factor).  
 STEP 6. Calculate the combined margin (CM) emissions factor

Step 1: Identify the relevant electric power system

Each CPA supplies energy to the National Interconnected Electric Grid (SEIN), therefore, the identified electricity power system is the Peruvian National Electricity Grid (SEIN).

The Project displaces electricity from an electricity distribution system (in this case, the SEIN) that is or would have been supplied by at least one fossil fuel fired generating unit.

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional).

The tool provides 2 options, including:

Option I: Only grid power plants are included in the calculation.

Option II: Both grid power plants and off-grid power plants are included in the calculation All CPAs uses Option I for calculating the grid emission factor.

Step 3: Select an OM method

Out of four options for the OM, the Dispatch Data Analysis OM (OM -DD) is selected as the option for all CPAs located in Peru. The Simple OM method cannot be used since low cost, must-run resources constitute more than 50% of total grid generation in Peru<sup>6</sup>. Also, it was not necessary to use either the Simple Adjusted OM approach or the Average OM approach because detailed dispatch data is available.

Step 4: Calculate the operating margin emission factor according to the selected method

The formula for the OM-DD emission factor (EF<sub>grid,OM-DD,y</sub>) used was provided by the Tool as follows:

$$EF_{grid,OM-DD,y} = \frac{\sum h EGPJ,h}{EGPJ,y} * EF_{EL,DD,h}$$

Where:

EF<sub>grid,OM-DD,y</sub> :Dispatch data analysis operating margin CO2 emission factor in year y (tCO2/MWh)

EGPJ,h : Electricity displaced by the CPA in hour, h, of year, y (MWh)

EF<sub>EL,DD,h</sub> = CO2 emission factor for grid power units in the top of the dispatch order in hour h, in year y (tCO2/MWh)

EGPJ,y = Total electricity displaced by the CPA in year, y (MWh)

h = Hours in year, y, in which the CPA is displacing grid electricity y = Year in which the CPA is displacing grid electricity

The hourly emissions factor is calculated based on the energy efficiency of the grid

<sup>6</sup> COES Annual Statistics Report (2010) Table N° 2.2A. According to this table, thermal generation in 2010 was 13 462.27 GWh, which represents 41.52%; while, hydro generation was 18 964.56 GWh, which represents 58.48%. Therefore, low cost, must-run resources constitute more than 50% of total grid generation in Peru. In internet <http://www.coes.org.pe/wcoes/coes/estadistica/estadanual.aspx>.



power unit and the fuel type used, as follows:

$$EF_{EL,DD,h} = \frac{\sum n E_{Gn,h} \times EF_{EL,n,y}}{\sum n E_{Gn,h}}$$

Where,

$EF_{EL,DD,h}$  = CO<sub>2</sub> emission factor for power units in the top of the dispatch order in hour, h, in year, y (tCO<sub>2</sub>/MWh)

$E_{Gn,h}$  = Net quantity of electricity generated and delivered to the grid by power unit, n, in hour, h (MWh)

$EF_{EL,n,y}$  = CO<sub>2</sub> emission factor of power unit, n, in year, y (tCO<sub>2</sub>/MWh)

n = Power units in the top of the dispatch.

h = Hours in year, y, in which the CPA is displacing grid electricity.

To determine the set of grid power units n that are in the top of the dispatch at each hour h, the power units were stacked using the merit order. The group of power units, n, in the dispatch margin includes the units in the top x% of total electricity dispatched in the hour, h, where x% is equal to the greater of either 10%, or

The quantity of electricity displaced by the project activity during hour h divided by the total electricity generations by grid power plants during that hour h

The CO<sub>2</sub> emission factor of power unit ( $EF_{EL,n,y}$ ) is calculated as per the guidance for the simple OM, using the option A2.

$$EF_{EL,n,y} = EFCO2,n,y,i,h \times 3.6 / Nn,y$$

Where,

$EF_{EL,n,y}$  = CO<sub>2</sub> emission factor of power unit n in year, y (tCO<sub>2</sub>/MWh)

$EFCO2,n,y,i,h$  = Average CO<sub>2</sub> emission factor of fuel type i used in power unit n in year y (tCO<sub>2</sub>/GJ)

$Nn,y$  = Average net energy conversion efficiency of power unit n, in year y, (ratio)

n = All power units serving the grid in year y except low-cost/must-run power units

y = Applicable year during monitoring (ex-post option)

Step 5: Calculate the build margin (BM) emission factor

The build margin emissions factor is the generation-weighted average emission factor (tCO<sub>2</sub>/MWh) of all power units, m, during the most recent year, y, for which power generation data is available, calculated as follows:

$$EF_{grid,BM,y} = \frac{\sum m E_{Gm,y} \times EF_{EL,m,y}}{\sum m E_{Gm,y}}$$

Where,

$EF_{grid,BM,y}$  : Build margin CO<sub>2</sub> emission factor in year, y (tCO<sub>2</sub>/MWh)

$E_{Gm,y}$  : Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)

$EF_{EL,m,y}$  : CO<sub>2</sub> emission factor of power unit m in year y (tCO<sub>2</sub>/MWh)

m : Power units included in the build margin

y : Most recent historical year for which power generation data is available

According to the "Tool to calculate the emission factor for an electricity system", version 07.0, the sample group of power units m used to calculate the build margin should be determined as per the following procedure, consistent with the vintage data selected above:

Identify the set of five power units, excluding power units registered as CDM project activities, that started to supply electricity to the grid most recently (SET5-units) and determine their annual electricity generation (AEGSET-5-units, in MWh);

Determine the annual electricity generation of the project electricity system, excluding power units registered as CDM project activities (AEG<sub>total</sub>, in MWh). Identify the set of power units, excluding power units registered as CDM project activities, that started to supply electricity to the grid most recently and that comprise 20% of AEG<sub>total</sub> (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) (SET<sub>≥20%</sub>) and determine their annual electricity generation (AEG<sub>SET-≥20%</sub>, in MWh);

From SET<sub>5</sub>-units and SET<sub>≥20%</sub> select the set of power units that comprises the larger annual electricity generation (SET<sub>sample</sub>); Identify the date when the power units in SET<sub>sample</sub> started to supply electricity to the grid. If none of the power units in SET<sub>sample</sub> started to supply electricity to the grid more than 10 years ago, then use SET<sub>sample</sub> to calculate the build margin. Ignore steps (d), (e) and (f).

Exclude from SET<sub>sample</sub> the power units which started to supply electricity to the grid more than 10 years ago. Include in that set the power units registered as CDM project activity, starting with power units that started to supply electricity to the grid most recently, until the electricity generation of the new set comprises 20% of the annual electricity generation of the project electricity system (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) to the extent is possible. Determine for the resulting set (SET<sub>sample</sub>-CDM) the annual electricity generation (AEG<sub>SET-sample-CDM</sub>, in MWh); If the annual electricity generation of that set is comprises at least 20% of the annual electricity generation of the project electricity system (i.e.  $AEG_{SET-sample-CDM} \geq 0.2 \times AEG_{total}$ ), then use the sample group SET<sub>sample</sub>- CDM to calculate the build margin. Ignore steps (e) and (f).

Otherwise:

Include in the sample group SET<sub>sample</sub>-CDM the power units that started to supply electricity to the grid more than 10 years ago until the electricity generation of the new set comprises 20% of the annual electricity generation of the project electricity system (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation);

The sample group of power units *m* used to calculate the build margin is the resulting set (SET<sub>sample</sub>-CDM->10yrs).

Out of SET<sub>5</sub>-units and SET<sub>≥20%</sub>, the latter group was selected as SET<sub>sample</sub> due to the fact that it includes the larger annual electricity generation.

In terms of vintage data, to calculate the build margin Option 1 is chosen for the proposed Project;

Option 1: For the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group *m* at the time of CDM-PDD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period.

Step 6: Calculate the combined margin (CM) emissions factor.

The calculation of the combined margin (CM) emission factor (EF<sub>grid,CM,y</sub>) is based on one of the following methods:

Weighted average CM; or  
Simplified CM.

The simplified CM method (option b) can only be used if:  
 The project activity is located in a Least Developed Country (LDC) or in a country with less than 10 registered projects at the starting date of validation; and  
 The data requirements for the application of step 5 above cannot be met.

The weighted average CM method (option a) should be used as the preferred option:

$$EF_{grid,cm,y} = EF_{grid,om,y} \times WOM + EF_{grid,bm,y} \times WBM$$

Where:

WOM : Weighting of OM emission factor (%)

WBM : Weighting of BM emission factor (%)

For the proposed PoA (2<sup>nd</sup> crediting period renewal), the following default values are used: WOM = 0.25 and WBM = 0.75. .

### LEAKAGE (Ly)

According to the applicable methodology, leakage calculation is considered if the energy generating equipment is transferred from another activity. Since the CPAs acquire new equipment, leakage is zero.

$$Ly = 0.$$

### EMISSION REDUCTIONS ER<sub>y</sub>

The emission reduction attributable to the CPA during a given year y (ER<sub>y</sub>) are the difference between the baseline emissions (BE<sub>y</sub>) and project emissions (PE<sub>y</sub>) and leakage emissions (Ly), as follows:

$$ER_y = BE_y - PE_y - Ly$$

Where

ER<sub>y</sub> = Emissions reductions of the project activity during the year y in t CO<sub>2e</sub>

BE<sub>y</sub> = Baseline emissions during the year y in t CO<sub>2e</sub>

PE<sub>y</sub> = Project emissions during the year y in t CO<sub>2e</sub>

LE<sub>y</sub> = Leakage emissions in the year y in t CO<sub>2e</sub>

The estimation emission reduction for the renewal crediting period is calculated as below:

Baseline emission:

Project Capacity (MW): 15 MW:

Reference/Source: As the Programme of Activities uses the methodology AMS-I.D. the capacity of any individual CPA cannot be more than 15 MW in accordance with the definition of CDM Small-scale projects

Project Load Factor (%): 89.5%:

Reference/Source: In accordance with the estimated ER calculation sheet of CPA #1 please refer to:

[https://cdm.unfccc.int/ProgrammeOfActivities/cpa\\_db/F05ERU9W4GVPJ8QSKBCY02XA16NTDZ/view](https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCY02XA16NTDZ/view)

Annual Generation (MWh): 117,603 Mwh

Baseline emission= 579,957 (Addition of annual estimation emission reduction)/7=82,851 tCO<sub>2e</sub> (Please refer the Estimated ER sheet. The baseline emission is calculated as Net generation \* grid emission factor. Net generation is 117,603\*0.7045= 82,851 tCO<sub>2e</sub> annually)

Project and leakage emission is = 0

Emission reduction= 82,851 tCO<sub>2e</sub>

## D.2.4. Validity of monitoring plan

<b>Means of validation</b>	Assessment team checked the monitoring practice of generic CPA and also checked the requirement of AMS-I.D version 18 and procedure mentioned in the registered PDD of 1 <sup>st</sup> CP.
<b>Findings</b>	No CAR is raised for the section
<b>Conclusion</b>	<p>Following monitoring parameters are included in generic CPA and the same is as per the requirement of approved methodology:</p> <p><math>EG_{BL,y} / EG_{PJ, facility, y}</math> : Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y / Quantity of net electricity supplied to the grid by the project plant/unit in year y. The primary source of data for the parameter is electricity meter(s) to be specified in each CPA and or COES information. The net electricity supplied to the grid is measured continuously and recorded at least each hour according to COES requirements.</p> <p>A high level of accuracy of the measurements is achieved due to the use high-precision equipment calibrated and tested.</p> <p>Every CPA defines detail the specific conditions to measure the electricity imported to the grid. The following cases, among others, may occur:</p> <ul style="list-style-type: none"> <li>- The net electricity is calculated by subtracting the electricity exported with the electricity imported by the CPA, both measured with calibrated meters.</li> <li>- The net electricity is calculated by subtracting electricity consumptions arriving not by the power plant transmission line (e.g. external lighting) listed in commercial invoices.</li> </ul> <p>Measuring energy equipment complies with updated national or IEC standards (at the moment of submitting the PoA-DD, energy meters shall be at least with a precision class of 0.2 according to COES regulation), and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once every three years.</p> <p>The meter readings may be cross-check with available internal and/or external information as electricity invoices or COES information.</p> <p>Since COES reports official information of the SEIN operation, in case of troubles with the energy readings or meter operation, COEs information.</p> <p>Energy meters are property of the CPA owner unless it is justified otherwise due to technical conditions, regulatory framework, among others.</p> <p>Data is kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whatever occurs later</p> <p><math>TEG_y</math>: Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year. The primary source of data for the parameter is Project activity specific information. Measuring equipment is verified at least once every year. The meter readings may be cross-check with available internal and/or external information as electricity invoices.</p> <p><math>Cap_{PJ}</math>: Installed capacity of the hydro power plant after the implementation of the project activity. This parameter primary source will be project specific CPA to be included. The data can be checked from the project site. The parameter for each CPA inclusion is Determine yearly regarding the installed capacity based on recognized standards.</p> <p><math>AP_J</math> : Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full. This parameter primary source will be project specific CPA to be included. The data can be checked from the project site. The parameter can be Yearly measured from topographical</p>

surveys, maps, satellite pictures, etc.

$EF_{grid,CM,y}$  : Emission factor for the Peruvian interconnected grid (SEIN). The baseline emission factor ( $EF_{grid,CM,y}$ ) is calculated as a combined margin (CM), consisting of the combination of operating margin ( $EF_{grid,OM,y}$ ) and build margin ( $EF_{grid,BM,y}$ ) factors. The value is monitored however for the 2<sup>nd</sup> renewal the CM value calculated as per the tool to calculate the emission factor version 07 as 2018:0.7045.

$EF_{grid,OM-DD,y}$ : The Dispatch Data Analysis OM emission factor. The dispatch data analysis operating margin emission factor ( $EF_{OM-DD,y} = EF_{grid,OM,y}$  in tCO<sub>2</sub>/MWh) is a method which involves the power unit that are actually dispatched at the margin during each hour  $h$ , where the power unit are separated in power unit in the top of the dispatch  $n$  and other power unit. The value is monitored however for the 2<sup>nd</sup> renewal the OM value calculated as per the tool to calculate the emission factor version 07 as 2018: 0.8583.

$EG_{PJ,h}$  : Electricity displaced by the project activity in hour  $h$  of year  $y$ . The primary source of data is Project records and/or COES. The parameter is Directly measured and/or based on the information provided by COES. The proportion of data to be monitored is 100% and the data is archived electronically.

The CPA specifies the value and measurements used (same value as  $EG_{BL,y}$  /  $EG_{PJ,facility,y}$  for new power plants and only the incremental electricity in the case on retrofitting, replacement and capacity additions).

$EG_{PJ,y}$ : Total electricity displaced by the project activity in year  $y$ . The primary source of data is Project records and/or COES. The proportion of data to be monitored is 100% and the data is archived electronically.

The CPA has to specify the value and measurements used (same value as  $EG_{BL,y}$  /  $EG_{PJ,facility,y}$  for new power plants and only the incremental electricity in the case on retrofitting, replacement and capacity additions).

$EF_{EL,DD,h}$  : CO<sub>2</sub> emission factor of power unit in the top of the dispatch order in hour  $h$  in year  $y$ . The primary source of data for the parameter is Input data provided by COES. To calculate  $EF_{EL,DD,h}$  the second option is chosen because for the power units data on fuel consumption and electricity generation is available. The proportion of data to be monitored is 100% and the data is archived electronically.

$EG_{n,h}$  : Electricity generated and delivered to the grid by power units  $n$  in hour  $h$ . The primary source of data for the parameter Data provided by COES. Data used is presented in the spreadsheet for Grid Emission Factor calculation. The proportion of data to be monitored is 100% and the data is archived electronically.

$EF_{EL,n,y}$  : CO<sub>2</sub> emission factor of power unit  $n$  in year  $y$ . The  $EF_{EL,n,y}$  is determined for method the simple operating margin option A.2. Data used is presented in the spreadsheet for Grid Emission Factor calculation. The proportion of data to be monitored is 100% and the data is archived electronically.

$\eta_{n,y}$ : Average net energy conversion efficiency of power unit  $n$  in year  $y$  (ratio). The primary source of data for the parameter is Data provided by COES. Each year this data is checked with the last available annual report of COES. Data used is presented in the spreadsheet for Grid Emission Factor calculation.

The proportion of data to be monitored is 100% and the data is archived electronically. If the data used is significantly lower than the default value of the applicable technology, CPA owner should assess the reliability of the values, and provide appropriate justification if deemed reliable. Otherwise, the default values above shall be used.

	<p><math>EF_{CO2,n,i,y}</math>: Average CO<sub>2</sub> emission factor of fuel type i used in power unit n in year y. The primary source of data is IPCC default values at the lower limit of the uncertainty at a 95% confidence interval as provided in Table 1.4 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories. The value applied for 2<sup>nd</sup> CP is Diesel Oil = 72,600, Residual Fuel Oil = 75,500, Natural Gas = 54,300 Coal = 87,300. The parameter is subjected to monitoring and hence Every update of IPCC reports is taken into account.</p> <p><math>W_{OM}</math>: Weighting of operating margin emissions factor. The first crediting period, <math>W_{OM} = 0.5</math> and for The second and third crediting period, <math>W_{OM} = 0.25</math> as per the requirement of the tool to calculate the emission factor version 07.</p> <p><math>W_{BM}</math>: Weighting of operating margin emissions factor. The first crediting period, <math>W_{BM} = 0.5</math> and for The second and third crediting period, <math>W_{BM} = 0.75</math> as per the requirement of the tool to calculate the emission factor version 07.</p> <p>Merit Order: The merit order in which power plants are dispatched by documented. The primary source of data for the parameter is Data provided by COES. For each year, the variable cost of thermal plants in the SEIN that are in effect in December are used. The proportion of data to be monitored is 100% and the data will be archived electronically.</p> <p><math>EF_{grid, BM, y}</math>: The build margin emissions factor. The primary source is Official data provided by the administrator of the grid or the relevant national authority (COES) publicly available in its web site or directly sent to the coordinating/managing entity. The value is monitored however for the 2<sup>nd</sup> renewal the BM value calculated as per the tool to calculate the emission factor version 07 as 2018: 0.65320.</p> <p><math>EG_{m, y}</math>: Net quantity of electricity generated and delivered to the grid by power unit m in year y. The primary source of data for the parameter is Input data provided by COES. The proportion of data to be monitored is 100% and the data will be archived electronically. Data used is presented in the spreadsheet for Grid Emission Factor calculation.</p> <p><math>EF_{EL, m, y}</math>: CO<sub>2</sub> emission factor of power unit m in year y. The primary source is Official data provided by the administrator of the grid or the relevant national authority (COES). The <math>EF_{EL,m,y}</math> is determined for method the simple operating margin option A.2.. The proportion of data to be monitored is 100% and the data will be archived electronically.</p>
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### D.2.5. Eligibility criteria for inclusion of CPAs

<b>Means of validation</b>	The eligibility criteria has been developed to meet the references in Standard. Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities Version 03.0.			
<b>Findings</b>	CAR 04 was raised during the validation process and closed successfully			
<b>Conclusion</b>	A CPA to be included in the present PoA fulfils the following conditions:			
	No	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion
	1	Geographical boundary	Each CPA will be located within the physical/geographical boundary of the PoA	<p>Unique GPS coordinates Please refer CPA DD 1 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view</a></p> <p>CPA DD 2 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cp">https://cdm.unfccc.int/ProgrammeOfActivities/cp</a></p>

				<p>a_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view</p> <p>CPA DD 3  <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view</a></p> <p>CPA DD 4  <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view</a></p>
	2.	Double Counting existing reservoir with no change in the volume of the reservoir; or where the volume of the reservoir is increased considering a final power,	Each CPA will not be involved in another registered or under validation as a CDM project activity or as a CPA under the proposed or another PoA or as other GHG reduction projects related to small hydro power project	Declaration of double counting check, Unique GPS coordinate .
	3.	Other PoAs or projects	There is no other registered CDM project activity, included in another registered PoAs, deregistered project activities with the same identification data.	Declaration of double counting check, GPS coordinates, Analysis of projects in the CDM pipeline
	4.	Technology/ Measure	<p>Each small-scale CPA will introduce grid-connected hydro power project where the installed capacity of the plant is less than or equal to 15 MW</p> <p>Each CPA implementer will provide Manufacturer's specifications of hydro turbine facility/equipment and Standardized Power Purchase Agreement (SPPA) to describe the applied technology/measure.</p>	Description of the technologies including expected lifetime, capacity, plant load factor, and any manufacturer specifications in CPA-DD; Standardized Power Purchase Agreement
	5.	Start date.	Do not have a start date (as defined by the UNFCCC Glossary of Terms) before July 7th, 2011. Since the start	Contracts for supplying turbines, contract for civil works, payments set in PPAs,

		<p>date can be defined by different project milestone, the CPA owner provides formal documentary evidence to the CME for its evaluation when the start date has already occurred (e.g. contracts for supplying turbines, contract for civil works, payments set in PPAs, contracts with the entity financing the project, among others according to the project characteristics).</p>	<p>contracts with the entity financing the project, among others according to the project characteristics, or licenses, among others</p>
6.	Compliance with the applicability conditions of AMSI.D.	<p>Each CPA will satisfy the applicability conditions for simplified baseline and monitoring methodologies as specified in the AMSI.D. (Version 18.0)</p>	<p>Applicability conditions of AMSI.D. (Version.18.0) Section B of CPA-DD</p>
7.	Additionality	<p>The CPA is able to demonstrate additionality with one of the options listed in section,C taking into consideration that approach 1 is only for projects up to 5 MW of installed capacity (list of technologies additional by default or CPA placed in an underdeveloped area). Any project over 5 MW demonstrates a financial additionality</p>	<p>Decision based in the socioeconomic data of Peru as listed in the PoA, on a formal EB approval of additional technologies of the country, on technical reports, information submitted to banks or governmental institutions as part of the project implementation process, among others, to develop a financial analysis as part of the investment barrier additionality procedure.</p>
8.	Local Stakeholder Consultation and Environmental Impact Analysis.	<p>Each CPA will hold local stakeholder consultation before the inclusion in PoA and construction. Each CPA will conduct environmental impact analysis as per the national compliance</p>	<p>Invitations evidences (letters, posters, photos, video), assistance list, agreement records, among others.</p>
9.	Public Funding	<p>Each CPA will provide an affirmation that funding from Annex I party, if any, does not result in a diversion of official development assistance.</p>	<p>Affidavit on No Public Funding from Annex 1 party</p>



	10.	Target Group	The target group of each CPA will be the connected to Peruvian electricity grid (Interconnected National Electric System or SEIN grid)	<p>CPA-DDs of all four CPAs Please refer to CPA DD 1 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view</a></p> <p>CPA DD 2 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view</a></p> <p>CPA DD 3 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view</a></p> <p>CPA DD 4 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB809JGPQEC/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB809JGPQEC/view</a></p>
	11.	Sampling	Not Applicable, Sampling procedures are not applied	Not Applicable
	12.	Small-Scale Thresholds	The capacity of each hydro power project will not exceed 15MW over the entire crediting period as small-scale CDM project activities. In case of microscale CPA, the installed capacity of each hydro power project will not exceed 5MW over the entire crediting period.	Sworn declaration based on format developed by the CME
	13.	Debundling Check	Each CPA is not a debundled component of a large scale project activity as per Para.15 of Methodological tool Assessment of debundling for smallscale project activities	Sworn declaration based on format developed by the CME

**SECTION E. Internal quality control**

As final step of a validation of the final documentation including the Renewable crediting period validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

**SECTION F. Validation opinion**

Applus+ Certification has performed a validation of the "Tunki Small Scale Hydropower Program of Activities". The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. AMS-I.D version 18, given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

Applus+ Certification has received a confirmation from the host Party that the project activity assists it in achieving sustainable development.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO<sub>2e</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the positive list of renewable project demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 82,851 tCO<sub>2e</sub>.

The validation has been performed following the requirements of the latest version of the CDM validation and verification standard for programme of activities, version 02 and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.

## 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)
IR	Internal Resource
OR	Outside resource
OEM	Original Equipment manufacturer
OM	Operating Margin
PP	Project Participant

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

1. **Mr. Sukanta DAS**, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than eight years of working experience at TUV NoRD/ Re-consult/CRA/APPLUS certifications under various categories of projects stating from Renewable to waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas

1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit.

2. **Meng (Simon) Shen** (Master Degree in Thermal Energy Engineering, Bachelor Degree in Environmental Engineering) is a Lead Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ LGAI, he had been worked for TÜV SÜD as a GHG Validator/Assessment team and ISO 9001/14001 Lead Auditor for 3.5 years.

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
2	NA	CPA-1,2,3 and 4 for 1st PoA DD renewal.	CPA-DDs of all four CPAs Please refer to CPA DD 1 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view</a>  CPA DD 2 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view</a>  CPA DD 3 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view</a>  CPA DD 4 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view</a>	Project participant
3	NA	1st PDD version 06  PDD based on which opinion is provided- Version 07	16/11/2019  27/11/2019	Project participant
4	NA	Estimated Emission reduction calculation sheet- version 01  Grid emission factor calculation sheet version 01	04/12/2019  04/12/2019	Project participant
5	NA	AMS-I.D version 18	UNFCCC CDM web site	UNFCCC
6	NA	<a href="http://www.coes.org.pe/portal/">http://www.coes.org.pe/portal/</a> COES portal for emission factor calculation.	Reference link is provided.	Independent Search
7	NA	Tools/ guidelines used in the project	UNFCCC CDM web site	UNFCCC

		<p>activity:</p> <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 CO<sub>2</sub> emissions from fossil fuel combustion, Version 3.</li> <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>		
8		Unique GPS coordinates	<p>CPA-DDs of all four CPAs Please refer to CPA DD 1 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/F05ERU9W4GVPJ8QSKBCYO2XA16NTDZ/view</a></p> <p>CPA DD 2 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/RFPBQX5AUOS820HIE3T1M6Y4NWD9LV/view</a></p> <p>CPA DD 3 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/YJIRBA9SCO2GMDPE0NLWK431HU5X7V/view</a></p> <p>CPA DD 4 <a href="https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view">https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/6YZDI30FVUS5KNXHA7LMB8O9JGPQEC/view</a></p>	

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

Table 1. CL from this validation

<b>CL ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of CL</b>				
<b>Project participant response</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>				
<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY

Table 2. CAR from this validation

<b>CAR ID</b>	01	<b>Section no.</b>	D.2.1	<b>Date:</b> 01/11/2019
<b>Description of CAR</b>				
The Applicability criteria as per AMS.I.D version 18 is not fulfilled. All the applicability para of AMS.I.D version 18 is not complied and hence Corrective action is sought for the same.				
<b>Project participant response</b>				<b>Date:</b> 07/11/2019
<i>Section I.1 page no 19 of the PD.</i>				
<b>Documentation provided by project participant</b>				
<i>PoA DD V07</i>				
<b>DOE assessment</b>				<b>Date:</b> 04/12/2019
The applicability criteria is now included in revised PoA DD version 07. The same is checked by the assessment team and found correct. CAR is thus closed.				

<b>CAR ID</b>	02	<b>Section no.</b>	D.2.2	<b>Date:</b> 01/11/2019
<b>Description of CAR</b>				
Section I.5 of the PoA-DD is not in Compliance with EB 66 Annex 47 i.e. continuity with original baseline guidance. The Section is thus reserved till the submission of the revised PDD along with supporting's.				
<b>Project participant response</b>				<b>Date:</b> 07/11/2019
<i>Updated in section I.5</i>				
<b>Documentation provided by project participant</b>				
<i>PoA DD V07</i>				
<b>DOE assessment</b>				<b>Date:</b> 04/12/2019
The baseline section is now updated. CAR is thus closed.				

<b>CAR ID</b>	03	<b>Section no.</b>	D.2.3	<b>Date:</b> 01/11/2019
<b>Description of CAR</b>				
The grid emission factor calculation is not as per the Tool to calculate the emission factor for an electricity system" version 07, EB100, Annex 04. The Steps for GEF calculation as per latest tool version 07 is not done in systematic way for the calculation. The calculation step for Operating, Build and combined margin are not demonstrated in the Sheet. The GEF calculation thus will be reserved till the submission of appropriate documents.				
<b>Project participant response</b>				<b>Date:</b> 07/11/2019
<i>Revised</i>				
<b>Documentation provided by project participant</b>				
<i>Revised ER sheet</i>				

<b>DOE assessment</b>	<b>Date:</b> 04/12/2019
The revised emission factor calculation is now correctly done as per the requirement of Tool to calculate the emission factor for an electricity system" version 07, EB100, Annex 04. CAR is closed.	

<b>CAR ID</b>	04	<b>Section no.</b>	D.2.5	<b>Date:</b> 01/11/2019
<b>Description of CAR</b>				
The eligibility criteria for inclusion of CPAs does not fulfill the criteria laid down for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities, Version 2.1. The obsolete version is used for the same and hence Corrective action is sought for the same.				
<b>Project participant response</b>				<b>Date:</b> 07/11/2019
<i>Updated in revised PoA DD</i>				
<b>Documentation provided by project participant</b>				
<i>PoA DD V07</i>				
<b>DOE assessment</b>				<b>Date:</b> 04/12/2019
The eligibility criteria for inclusion of CPAs is now mentioned as per the requirement of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities, Version 2.1. CAR is thus closed.				

Table 3. FAR from this validation

<b>FAR ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
<b>Project participant response</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>				
<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	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 programmes of activities” (CDM-EB93-A08-STAN) and version 02.0 of the “CDM project cycle procedure for programmes of activities” (CDM-EB93-A09-PROC);</li><li>• Make editorial improvements.</li></ul>
01.0	29 December 2017	Initial publication.

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Decision Class: Regulatory  
Document Type: Form  
Business Function: Renewal of crediting period  
Keywords: crediting period, programme of activities, validation report

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