




**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>	Title: Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam UNFCCC ref no: 6095
<b>Number and duration of the next period</b>	2 <sup>nd</sup> Crediting period. Duration: 20/08/2019 to 19/08/2026
<b>Version number of the validation report</b>	<del>2.04.2</del>
<b>Completion date of the validation report</b>	<del>229/075/2020</del>
<b>Version number of PoA-DD to which this report applies</b>	Version <del>6.05.2</del> of <del>208/075/2020</del>
<b>Coordinating/managing entity (CME)</b>	Vietnam PoA Carbon Management Joint Stock Company
<b>Host Parties</b>	Viet Nam
<b>Applied methodologies and standardized baselines</b>	ACM0002 'Grid-connected electricity generation from renewable sources' (Version 20.0)
<b>Mandatory sectoral scopes</b>	1
<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>	-
<b>Name and UNFCCC reference number of the DOE</b>	Carbon Check India Pvt. Ltd. UNFCCC reference number: E-0052
<b>Name, position and signature of the approver of the validation report</b>	<u>Amit Anand, CEO</u> 

## SECTION A. Executive summary

### >> Purpose and general description and location:

The Programme of activities comprises one or more small hydropower plants (CPAs) with rated capacity no more than 30 MW, as defined under Vietnamese regulation, that are constructed by one or more third-party project owners. Each CPA may use different technologies to convert kinetic energy of water to generate electricity. The technologies may include (but not limit to): Pelton, Kaplan, Turgo, Francis turbines etc. The technologies employed in each CPA may differ from one CPA to the next, and may comprise inter alia barrages, diversion tunnels, fore bays, spillways, pressure pipes, powerhouses, and booster stations.

The programme of activities are implemented throughout Viet Nam.

### Validation scope:

The objective of the Validation is to have an independent evaluation of a PoA with each generic component project activity (CPAs) and any CPA proposed to be included in the PoA by a designated operational entity against the requirements of the CDM as set out in decision 3/CMP.1, its annex and relevant decisions of the COP/MOP, on the basis of the Programme Design Document (POA-DD) and of the Component Project Activity Design Document (CPA-DD). In particular, the demonstration of additionality of the PoA as a whole, the eligibility criteria for inclusion of a CPA in the PoA, the baseline determination for each generic CPA, the monitoring plan for each generic CPA, the estimated emission reduction from any CPA proposed in the project and the programme's compliance with relevant UNFCCC requirements and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoA projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is to review the PoA-DD/CPA-DD against the UNFCCC criteria for CDM.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the procedures for registration of programme of activity as a single CDM and the subsequent decisions by the CDM Executive Board.

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

### Validation process:

Validation was conducted using Carbon Check procedures in line with the requirements specified in the CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

The validation consisted of the following three phases:

- Document review;
- Follow-up actions;
- The resolution of outstanding issues and the issuance of the final validation report.

### Conclusion:

South Pole Carbon Asset Management Ltd. (South Pole Carbon) has commissioned Carbon Check to carry out the validation (renewal of crediting period) of the PoA "Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam" in Viet Nam, with regard to the relevant requirements for CDM activities.

This report summarizes the findings from the validation of the updated PoA-DD, performed on the basis of UNFCCC criteria for CDM, as well as criteria given by the CDM Validation and Verification Standard for PoA, CDM Project Cycle Procedure for PoA and CDM Project Standard for PoA and included an assessment of:

(a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period at the time of requesting renewal of crediting period.

(b) The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

In conclusion, the review of the PoA-DD and the subsequent follow-up interviews have provided Carbon Check with sufficient evidence to determine the programme of activity fulfilment of all the stated criteria. In our opinion, the CDM programme of activity meets all applicable UNFCCC requirements of the CDM for renewal of the PoA period.

## 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, Technical Expert (TA 1.2)	ER	Buragohain	Champok	CC IPL	√	X	√	√

### 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	IR	Agarwalla	Sanjay Kumar	CC IPL
2.	Approver	IR	Anand	Amit	CC IPL

## SECTION C. Means of validation

### C.1. Desk/document review

>> The PoA-DD version 5.0 of 05/05/2020, version 5.1 of 21/05/2020, ~~and~~ version 5.2 of 28/05/2020 and version 6.0 of 20/07/2020 /01/, in particular the applicability of the methodology, the baseline determination, the monitoring plan were assessed as part of the validation.

Appendix 3 lists the documentation that was reviewed during the validation.

### C.2. On-site inspection

Duration of on-site inspection: N/A				
No.	Activity performed on-site	Site location	Date	Team member
1.	-	-	-	-

Site visit has not been performed for the validation of the renewal of crediting period, in accordance with CDM validation and verification standard for programmes of activities, version 02.0, paragraph 183 /06/, as the estimated emission reductions per CPA is 8,012 tCO<sub>2</sub>e as verified from UNFCCC PoA webpage. Representatives from CME have been interviewed on skype/telephone, publicly available authentic sources were reviewed for cross checking information necessary for validation of the PoA.

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Hien	Dao	Representative of CME	20/05/2020	Status of the project activity and any modifications with respect to the registered PoA, The lifetime of the project activity; National and local policies and changes; Monitoring plan and changes	Champok Buragohain
2.	Loan	Hong	Representative of CME			
3.	Khunikakorn	Ladaporn Kat	South Pole Carbon Asset Management Ltd.	20/05/2020	PoA-DD preparation, Applicability to the latest methodology; Emission Factors and their updates; Baseline of the project and its updates.	Champok Buragohain

**C.4. Sampling approach**

&gt;&gt; Not applicable.

**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		1	
Programme of activities period			
Coordinating/managing entity and the project participants			
Post-registration changes			
<b>Generic component project activities</b>			
Application and selection of methodologies and standardized baselines			
Validity of original baseline or its update		1	
Estimated emission reductions or net anthropogenic removals			
Validity of monitoring plan	1		
Eligibility criteria for inclusion of CPAs			
Others (please specify)- <a href="#">During UNFCCC information and reporting check technical features of CPAs</a>	1		
<b>Total</b>	<b>24</b>	<b>2</b>	<b>0</b>

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

<b>Means of validation</b>	The PoA-DD was cross-checked with the latest PoA-DD template available at UNFCCC and with the instructions for filling out.
<b>Findings</b>	CAR 01 was raised as latest PoA-DD template was not used by CME which found correctly used following PoA-DD completion guideline
<b>Conclusion</b>	CC IPL confirms that the updated PoA-DD is in compliance with the latest version of the PoA-DD form (version 09.0) and the instructions therein for filling out the PoA-DD form. Carbon Check also confirms that the CME has updated the relevant sections of the PoA-DD in accordance with the relevant requirements in the Project Standard for PoA, version 02. Carbon Check further confirms that the information transferred to the updated version of the PoA-DD is materially the same as that in the registered PoA-DD /2/.

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

<b>Means of validation</b>	The PoA period is 7 years renewable. This is the second PoA period and its start date is 20/08/2019, which is day immediately after the expiration of current PoA period (i.e. 20/08/2012 to 19/08/2019).
<b>Findings</b>	NA
<b>Conclusion</b>	CC IPL confirms that the second PoA period for the PoA commences on the day after the expiration of the current PoA duration from 20/08/2019 which is as per paragraph 390 (a) (v) of VVS for PoA version 02 /6/.

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

<b>Means of validation</b>	Cross checking the CME and project participants name from the list of project participants and CME of the PoA from the view page at UNFCCC website and latest MoC statement. Carbon Check also reviewed the letter of approval (Ref:15/2010/DMHCC-BCD) dated: 14/07/2010 issued from the DNA of Viet Nam authorizing Vietnam PoA Carbon Management Joint Stock Company as CME and letter of approval from NDA of Switzerland (Ref: G514-3487, dated 27/09/2011) authorizing South Pole Carbon Asset Management Ltd. as project participant. The latest MoC dated: 19/11/2013 to confirm the name of the project participant.
<b>Findings</b>	NA
<b>Conclusion</b>	CC IPL confirms that the CME and project participants of the PoA is listed in the updated PoA-DD and this information is consistent with the information provided in the latest MoC and hence meets paragraph 384 and 390 (a) (vi) of VVS PoA version 02 /6/.

**D.1.4. Post-registration changes**

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Corrections	N	-	-
Inclusion of monitoring plan	N	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	N	-	
Changes to the programme design	N	-	-
Addition of CPA inclusion template	N	-	-
Changes specific to afforestation and reforestation activities	N	-	-
Change of coordinating/managing entity	N	-	-

**D.2. Generic component project activities****D.2.1. Application and selection of methodologies and standardized baselines**

<b>Means of validation</b>	The CME has applied the methodology ACM0002 Version 20 /5/. This version of the methodologies is the latest version and currently valid for the submission of the PoA. The PoA meets the criteria defined in the baseline methodology as described below:	
	Criteria	DOE assessment
	This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or I Involve a replacement of (an) existing plant(s)/unit(s).	A CPA under the PoA will consist of a renewable energy generation plant/unit (hydro) that supplies electricity and displaces electricity from an electricity distribution system (the national grid). Hence, meets the applicability condition.
	<p>The methodology is applicabl under the following conditions:</p> <p>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;</p> <p>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.</p>	A CPA under the proposed PoA will consist of a renewable energy generation plant/unit (hydro). No capacity addition activity shall be included in the PoA. The critaria is consistent with registered PoA-DD and hence justifies the applicability condition.
	In case of hydro power plants, one of the following conditions shall	A CPA under the proposed PoA will be a hydro power plant/unit either with a run-

	<p>apply:</p> <p>(a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or</p> <p>(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</p> <p>(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</p> <p>(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:</p> <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: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.</p>	<p>of-river reservoir or accumulation reservoir. In case the CPA utilizing new single or multiple reservoirs, the power density of each reservoir must be greater than 4 W/m<sup>2</sup> with or without the volume increased. The same shall be cross checked with respect to each CPA and hence meets the applicability condition.</p>
	<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</p>	<p>The PoA shall not consider any integrated hydro power plant. This is consistent with registered PoA-DD.</p>

	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.	
	The methodology is not applicable to: (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; (b) Biomass fired power plants/units.	The PoA does not consider any activity that involves switching from fossil fuel to renewable energy or any biomass fired power plant. This is consistent with registered PoA-DD.
	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".	The PoA shall not consider any plant which involves retrofit, rehabilitation, replacement or capacity addition. Hence, not applicable to the PoA and consistent with the registered PoA-DD.
	In addition, CME has justified the applicability conditions under para 5.9 of the methodology (ACM0002, version 20) transparently in section I.2 of the updated PoA-DD which is deemed acceptable to the validation team.	
<b>Findings</b>	N/A	
<b>Conclusion</b>	Carbon Check, hereby confirms that the selected baseline and monitoring methodology has been previously approved by the CDM Executive Board, and is applicable to the Project, which complies with all the applicability conditions therein and the selected version is valid at the time of submission of the proposed PoA for renewal of crediting period. It is also confirmed that the methodology is correctly applied by comparing it with the actual text of the applicable version of the methodology and there is no deviation from the selected methodology. Hence, the same is in compliance with paragraph 385 of VVS for PoAs, version 02 /6/.	

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

<b>Means of validation</b>	<p>The CME has included the assessment of the validity of the original baseline as per the tool "Assessment of the validity of the original/ current baseline and update of the baseline at the renewal of a crediting period", Version 3.0.1 /8/, which has been concluded to be still valid and applicable for the PoA</p> <p>The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period.</p> <p>Step 1: Assess the validity of the current baseline for the next crediting period</p> <p>Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</p> <p>The PoA involves one or more small hydropower plants (CPAs) with rated capacity no more than 30 MW, as defined under Vietnamese regulation connected to grid. In the absence of the project equivalent power would have been generated in the fossil fuel dominated grid. Therefore, baseline is the grid emission. Electricity Law</p>
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No. 28/2004/QH11 dated on 03/12/2004 and Law No. 50/2010/QH12 on “Economical and Efficient use of energy” dated on 17/06/2010 are the main laws that govern the electricity sector in Viet Nam /9/, /10/. Their implementation is regulated under Government Decree No. 14/2014/ND-CP on “Stipulating in detail the implementation of electricity law regarding electricity safety” dated on 26/02/2014. The national policy does not mandate hydro power for electricity generation nor prohibit use of fossil fuel to generate electricity. Therefore, the baseline scenario is still valid as per the original PoA /2/.

**Step 1.2: Assess the impact of circumstances**

The circumstances existing at the time of requesting renewal of crediting period are the same as existing in the validation of the PoA. The estimated baseline emissions using hydropower to supply renewable electricity to the Vietnam national grid that is currently dominated by fossil fuel power plants. The baseline scenario identified at the validation of the project activity was the continuation of the current practice without any investment. ~~It could be observed that the emission factor of the Vietnam national grid applied for the 1<sup>st</sup> crediting period was 0.5558 tCO<sub>2</sub>/MWh and updated to 0.92975 tCO<sub>2</sub>/MWh as per latest Vietnam national electricity grid emission factor for 2018 /11/.~~ The grid emission factor is calculated following steps as per tool ‘Tool to calculate the emission factor for an electricity system’ version 7.0 /12/. DOE accessed the latest emission factor published by Ministry of Natural Resources and Environment /11/, from publicly available source /13/ and confirms that ~~it meets the tool /12/ requirements. It can be confirmed that~~ most of the electricity is still generated by fossil fuel power plants. At the time of requesting renewal of the crediting period, the conditions used to determine the baseline scenario in the previous crediting period are still valid. New circumstances have not been observed which will harm the validity of the baseline scenario.

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

In the absence of the project activity, the equivalent electricity would have generated in fossil fuel dominated grid. Therefore the baseline identified is the continuation of use of the current equipment(s) without any investment. An investment is not necessary before the end of the next crediting period (i.e. 19/08/2026) as it is realistic to consider that fossil fuel dominated grid will exceed the crediting period for which renewal is requested.

**Step 1.4: Assessment of the validity of the data and parameter**

“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 implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity”.

The grid emission factor fixed during first crediting period need to be updated during the second crediting period. Following paragraph 99 of ‘Tool to calculate the emission factor for an electricity system’ version 7 /12/, step wise approach as defined in the tool shall be used for each CPA to be included in the PoA. The PoA-DD in section I.6 describes step-wise approach to determine the grid emission factor in line with the tool. It also describes the sources to be used and equations to be followed in line with the applied tool. The options as per the tool to determine OM, BM has been transparently described. The ~~and~~ CM emission factor shall be calculated for CPAs to be included applying 5025% of OM and 5075% of BM for the first crediting period and applying 25% of OM and 75% of BM for the second crediting period of CPAea. This isch CPA is in line with the tool /12/. data parameters are updated from registered PoA-DD:

Data/Parameter	Value in PDD	Value in updated PDD	Assessment
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	Operating margin CO <sub>2</sub> emission factor for grid connected power generation in year y ( $EF_{grid,OM,y}$ )	0.6240 tCO <sub>2</sub> /MWh	0.8795 tCO <sub>2</sub> /MWh	The updated emission factor is as per latest national grid emission factor data published on 12/03/2020 and hence correctly considered by PP for the second crediting period.
	Build margin CO <sub>2</sub> emission factor for grid connected power generation in year y ( $EF_{grid,BM,y}$ )	0.4875 tCO <sub>2</sub> /MWh	0.9465 tCO <sub>2</sub> /MWh	The updated emission factor is as per latest national grid emission factor data published on 12/03/2020 and hence correctly considered by PP for the second crediting period.
	Combined margin CO <sub>2</sub> emission factor for grid connected power generation in year y ( $EF_{grid,CM,y}$ )	0.5558 tCO <sub>2</sub> /MWh	0.92975 tCO <sub>2</sub> /MWh	The combined margin is calculated considering 25% of OM and 75% of BM as per 'Tool to calculate the emission factor for an electricity system' /12/. The data and calculation is correct and hence the updated value is accepted for the second crediting period.
<p>Considering the guidance provided under this step, calculation of emission factor and baseline emissions are updated for the next crediting period as per step 2.</p> <p>Step 2: Update the current baseline and the data and parameters Since, the existing baseline scenario is still valid, this step is not applicable.</p> <p>Finally, it is concluded that the original baseline scenario is valid and assessment is complete as per "Tool for the assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period v3.0.1 /8/.</p>				
<b>Findings</b>	CAR 2 was raised as PoA-DD was not transparent in all steps while assessing validity of original baseline using tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of a crediting period", Version 3.0.1 which PP has updated transparently and hence CAR is closed.			
<b>Conclusion</b>	CCIPL concludes that the validity of original baseline is justified in the updated PoA-DD as per paragraph 287 of CDM project standard for PoA version 2 /6/.			

### D.2.3. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	<b>Baseline Emissions:</b> In line with applied methodology ACM0002, version 20, baseline emissions are calculated as below:
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$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$$

$EG_{PJ,y} = EG_{facility,y}$  is the Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CPA in year y (MWh). This is to be calculated from monitoring parameters ( $EG_{y,export}$  and  $EG_{y,import}$ ) as per monitoring plan given in section I.7.1 of the updated PoA-DD. CPA specific data shall be monitored and hence no ex-ante estimation is provided for the PoA.

Grid emission factor ( $EF_{grid,CM,y}$ ) is calculated as per 'Tool to calculate the emission factor for an electricity system' version 07 /12/ and data published by Ministry of Natural resources and Environment, Department of Climate Change, Govt of Viet Nam ~~and ex-ante fixed value of 0.92975 tCO<sub>2</sub>/MWh to be used.~~ The grid emission factor shall be calculated following steps of 'Tool to calculate the emission factor for an electricity system' version 07 for each CPA of the PoA as per paragraph 99 of the tool. The PoA-DD in section I.6 describes step-wise approach to determine the grid emission factor in line with the tool. It also describes the sources to be used and equations to be followed in line with the applied tool. The options as per the tool to determine OM, BM has been transparently described. The CM emission factor shall be calculated for CPAs to be included applying 50% of OM and 50% of BM for the first crediting period and applying 25% of OM and 75% of BM for the second crediting period of CPA. This is in line with the tool /12/. The options as per the tool to determine OM, BM and CM applying 25% of OM and 75% of BM for each CPA is in line with the tool. Hence, it meets paragraph 100 and 101 of the tool /12/ for the entire second crediting period in the PoA.

#### Project Emissions:

In line with the applied methodology project emission applicable for the project activity is emissions from water reservoir of hydropower plants ( $PE_{HP,y}$ ):

For hydropower project activity that results in new single or multiple reservoirs and/or the increase of single or multiple existing reservoirs, the power density (PD) of the project activity shall be 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>)
- Cap<sub>PJ</sub>** = Installed capacity of the hydro power plant after the implementation of the project activity (W)
- Cap<sub>BL</sub>** = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero
- A<sub>PJ</sub>** = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m<sup>2</sup>)
- A<sub>BL</sub>** = 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<sup>2</sup>). For new reservoirs, this value is zero

If the power density of the project activity is greater than 4 W/m<sup>2</sup> and less than or equal to 10 W/m<sup>2</sup>, project emissions to be calculated as below:

$$PE_{HP,y} = \frac{EF_{Res} \times TEG_y}{1000}$$

Where:

	<p><math>PE_{HP,y}</math> = Project emissions from water reservoirs (t CO<sub>2</sub>e/yr)</p> <p><math>EF_{Res}</math> = Default emission factor for emissions from reservoirs of hydro power plants (kg CO<sub>2</sub>e/MWh)</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 y (MWh)</p> <p>If the power density of the project activity is greater than 10 W/m<sup>2</sup>,  <math>PE_{HP,y} = 0</math></p> <p>Area of the reservoirs measured in the surface of the water, after the implementation of the project activity (CPA specific), when the reservoir is full (m<sup>2</sup>)- 'A<sub>PJ</sub>' to be monitored once at the beginning of the crediting period.</p> <p>Installed capacity of the hydro power plant after the implementation of the project activity (W) 'Cap<sub>PJ</sub>' to be monitored at the beginning of each crediting period (CPA specific).</p> <p>Leakage emissions:  As per the applied methodology ACM0002, version 20.0, leakage emission is zero.</p> <p>Emission reductions (ER) = Baseline Emissions (BE) – Project Emissions (PE)- Leakage emissions (Ly)</p> <p>Therefore, emission reductions shall be CPA specific as per above procedures and calculations.</p>
<b>Findings</b>	N/A
<b>Conclusion</b>	<p>CC IPL confirms, the PoA-DD correctly lists assumption and data used by the PP for estimating emission reduction including their references and sources.</p> <p>Source of data and assumptions are correctly quoted and interpreted in the PoA-DD.</p> <p>All values used in the PoA-DD are considered reasonable in the context of the proposed CDM PoA.</p> <p>The baseline methodology and corresponding tools have been correctly applied to calculate project, baseline and leakage emissions, and emission reductions.</p> <p>All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.</p> <p>The validation team took cognizance paragraph 390 (a) (iv) of VVS for PoAs, version 02.0 /6/.</p>

#### D.2.4. Validity of monitoring plan

Means of validation	The monitoring plan in the PoA-DD is consistent with the latest methodology, ACM0002 Version 20. Validation team confirmed from the document review that the list of parameters including the means of monitoring is described in accordance with the applied methodology. Following are the parameters to be monitored for each CPA in the PoA:		
	Parameter	Description	Means of validation
	EG <sub>y,export</sub> (MWh)	Electricity supplied by the proposed CPA to the national grid, i.e. excluding the electricity generated by the proposed CPA used for internal consumption and losses.	To be monitored using two-way energy meter continuously and recorded monthly. The recorded data will be confirmed by the joint balance sheet which will be signed by the representatives of EVN and the project owner. Energy meters to be calibrated according to latest regulation in Vietnam /14/. The monitoring of

			the parameter is as per applied methodology /5/.
	$EG_{y,import}$ (MWh)	Electricity supplied by the national grid to the proposed CPA	To be monitored using two-way energy meter continuously and recorded monthly. The recorded data will be confirmed by the joint balance sheet which will be signed by the representatives of EVN and the project owner. Energy meters to be calibrated according to latest regulation in Vietnam /14/. The monitoring of the parameter is as per applied methodology /5/.
	$EG_{facility,y}$ (MWh)	Net electricity supplied to the national grid by the proposed project	Calculated as difference of $EG_{y,export}$ and $EG_{y,import}$
	$TEG_y$ (MWh)	Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y	Directly measured power meters will be installed at the output of generator to measure the amount of generated electricity. The generation is continuously monitored and monthly recorded.
	$A_{PJ}$ (m <sup>2</sup> )	Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.	This is to be monitored CPA specific once at the beginning of the crediting period.
	$Cap_{PJ}$ (W)	Installed capacity of the hydro power plant after the implementation of the project activity	This is to be monitored CPA specific once at the beginning of the crediting period. To be cross checked from nameplates, photographs etc.
The monitoring plan is still same in consistent with the latest methodology and hence valid for the next crediting period. Validation team is of the opinion that monitoring plan is feasible within the project design.			
<b>Findings</b>	CL1 was raised to clarify the monitoring and measurement procedure which PP has clarified considered the actual monitoring practice at place and hence CL is closed.		
<b>Conclusion</b>	CC IPL confirms that the monitoring plan included in the updated PoA-DD is valid as per the applied methodology and conforms the registered PoA-DD.		

### D.2.5. Eligibility criteria for inclusion of CPAs

Means of validation	The managing entity employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria's have been stated are in line with the applicability of the applied methodology ACM0002 version 20. Following has been included as eligibility criteria for CPAs to this PoA –				
	No.	Eligibility criterion – Category	Eligibility criterion – Required condition	Supporting evidence for inclusion	DOE assessment
	1	Geographical Boundary	Comprise one or more newly developed grid-connected hydro power plants located within the geographical	Geographical boundaries of CPAs are specified their Feasibility Study Report (FSR).	According to §124 (a), of the PS for PoAs, v2, the geographical boundary of each CPA, shall be consistent with the geographical

			boundary of Viet Nam.		boundary set in the PoA. The PoA boundary is set as Viet Nam. Validation team based on review of PoA-DD /1/ confirms that the eligibility criterion is defined in accordance with the project standard.
	2	Installed Capacity	Have a maximum installed capacity below or equal to 30 MW to be qualified as a small hydropower plant under Vietnamese regulations.	One or more of the following documents shall be provided for validation: <ul style="list-style-type: none"> <li>• FSR</li> <li>• EPC</li> <li>• Nameplate of equipment</li> </ul> Other relevant document.	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements of §124 (d) of the PS for PoAs, v2.  Validation team based on review of PoA-DD /1/ confirms that the eligibility criteria is defined in accordance with the project standard.
	3	Double Counting check	Be uniquely identified project which is neither registered as a CDM project activity nor included in another registered PoA to avoid double counting of emission reductions.	<ul style="list-style-type: none"> <li>• Available information on the UNFCCC website,</li> <li>• Confirmation of CPA owner for the same</li> </ul>	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (b) of the PS for PoAs, v2. Validation team based on review PoA-DD /1/ confirms that the eligibility criteria is defined in accordance with the project standard.
	4	Equipment	Use newly built equipment to generate electricity from hydro power.	The information on specification of the technology/measure may be validated from one of more of following documents: <ul style="list-style-type: none"> <li>• FSR</li> <li>• Nameplate of equipment</li> <li>• EPC contracts</li> <li>• Power purchase agreement (PPA)</li> <li>• Or other relevant available document.</li> </ul>	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements and applicability conditions prescribed by the methodology, as well as §124 (d) of the PS for PoAs, v2. Validation team based on review of PoA-DD /1/ confirms that the eligibility criterion is defined in accordance with the project standard.
	5	Start date	Have start date	The start date of	Validation team

			<p>after validation start date. Validation start date is defined as the date in which the PoA-DD, and generic and specific CPA-DDs were first uploaded to the UNFCCC website for public inputs (in accordance to EB 55, Annex 38, paragraph 7d) or in the case of the CPA having start date before validation start date, have start date between 22 June 2007 and validation start date and be included in the list that have been provided to UNFCCC for this PoA (in accordance to EB 47 Meeting Report, paragraph 72).</p>	<p>the CPA may be confirmed by one or more following documents:</p> <ul style="list-style-type: none"> <li>• Equipment Purchase Contract</li> <li>• Start of construction</li> <li>• Or any other document in line with the start date definition as per the glossary of CDM terms.</li> </ul>	<p>confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (e) of the PS for PoAs, v2. The start date of a CPA shall be after the PoA start date.</p> <p>Validation team based on review of PoA-DD /1/ confirms that the eligibility criterion is defined in accordance with the project standard for PoA.</p>
	6	Methodology requirements	<p>Be in line with requirements Methodology ACM0002, version 20.0: "Grid-connected electricity generation from renewable sources" for hydro power projects. The CPA shall meet the following sub-criteria:</p> <ul style="list-style-type: none"> <li>- not include any activities that consist of capacity additions, retrofits or replacements;</li> </ul>	<ul style="list-style-type: none"> <li>• Feasibility Study Report (FSR)</li> <li>• Other relevant available document.</li> </ul>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (f) of the PS for PoAs, v2.</p> <p>All CPAs utilizing this generic CPA-DD shall apply and should comply with the consolidated methodology ACM0002, version 20. Validation team based on review of PoA-DD /1/ confirms that the eligibility criteria is defined in accordance with the project standard.</p>

			<p>- be a hydro power plant/unit either with a run-of-river reservoir or accumulation reservoir. In case the CPA utilizing new single or multiple reservoirs, the power density of each reservoir must be greater than 4 W/m<sup>2</sup> with or without the volume increased</p> <p>- Not result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m<sup>2</sup>).</p>		
	7	CER rights	<p>Have a cooperation agreement with the CME to participate in the PoA. The Agreement shall clearly state that CPA owner cedes its rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC or any voluntary scheme to the CME of the present PoA.</p>	Emission Reduction Purchase Agreement between CPA owner and the CME.	Validation team based on review of PoA-DD /1/ confirms that the eligibility criteria is defined in accordance with the project standard.
	8	Additionality	<p>Additionality of GHG emission reductions is demonstrated in accordance to the "Tool for</p>	<p>Input for calculating investment analysis will taken from:</p> <ul style="list-style-type: none"> <li>• FSR</li> </ul>	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (g) of the PS for



			<p>the demonstration and assessment of additionality”, version 7.0.0 (for new CPAs). This means the CPA shall meet the following sub-criteria:</p> <ul style="list-style-type: none"> <li>• Demonstrate that the Project IRR is either less than the Commercial Lending rate or less than the Weighted Average Cost of Capital (WACC), in cases where the WACC is chosen as the appropriate Benchmark. It shall also be demonstrated that such conclusion is confirmed by a means of a sensitivity analysis.</li> </ul> <p>CPA is not common practice in Viet Nam.</p>	<ul style="list-style-type: none"> <li>• Published data on local commercial lending rates</li> <li>• Other relevant available document.</li> </ul>	<p>PoAs, v2. All CPAs shall be additional to be included in the PoA provided they meet this eligibility criterion of the PoA. This is adequately prescribed in the PoA-DD. Validation team based on review of PoA-DD /1/ confirms that the eligibility criteria is defined in accordance with the project standard.</p>
	9	Stakeholder consultations and environmental impact analysis	Undertake stakeholder consultations and environmental impact analysis as per requirements of the CDM modalities and procedures as well as the	<p>The information will be confirmed by following documents:</p> <ul style="list-style-type: none"> <li>• Invitation notice</li> <li>• Meeting minutes</li> <li>• Summary of comments received and</li> </ul>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (i) of the PS for PoAs, v2. Validation team based on review of PoA-DD /1/ confirms that the eligibility criterion is defined in</p>

			relevant laws and regulations of Viet Nam.	<p>how they have been taken into account.</p> <ul style="list-style-type: none"> <li>• Feasibility Study Approval</li> <li>• Environmental Impact Assessment Report Approval/ Environmental Protection Commitment</li> <li>• Investment Licence</li> <li>• Other relevant document.</li> </ul>	accordance with the project standard.
	10	Diversion of ODA fund	The CPA should have no public funding from Annex I countries resulting into the diversion of official development assistance or public funding;	<p>One of the following document shall be provided:</p> <ul style="list-style-type: none"> <li>• The declaration from the CPA implementer affirming that no funding from Annex I parties is used in the CPA;</li> <li>• Loan funding documents (if applicable).</li> </ul>	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §35 and §124 (j) in the PS for PoAs, v02. Validation team based on review of the PoA-DD /1/ confirms that the eligibility criterion is defined in accordance with the project standard.
	11	Target group	The CPA should be a grid-connected hydropower project.	Document pertaining to grid connection/ Grid connection agreement/ PPA etc shall be provided.	Validation team confirms that this eligibility criterion shall ensure that all CPAs shall specify the target group for all eligible CPAs in order to confirm to the applied methodology, as well as the PoA stated policy, operational and management framework inline with the requirements of §124 (k) of the PS for PoAs, v2. Validation team based on review of PoA-DD /1/ confirms that the eligibility criterion is defined in accordance with the project standard.
<b>Findings</b>		N/A			
<b>Conclusion</b>		CC IPL confirms that the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA. The			

	eligibility criteria will be checked at each CPA inclusion by the CME and shall be confirmed by the DOE to be fulfilled during CPA inclusion. The eligibility criterias are consistent with the first crediting period. Furthermore, the validation team confirms that eligibility criteria for the inclusion of CPAs in the PoA have covered as per the requirements of paragraph 124 of PS for PoAs, version 02 /6/.
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## SECTION E. Internal quality control

>>The final validation report has undergone a technical review and quality reviewer before being submitted to the project participant(s) and UNFCCC Executive Board. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification has performed the technical review.

## SECTION F. Validation opinion

>> South Pole Carbon Asset Management Ltd., has appointed the DOE, Carbon Check (India) Private Ltd., (CCIPL) to perform the validation of the Renewal of the PoA period for the PoA "Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam" /04/.

The validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism, latest version of Validation and Verification Standard and related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The programme of activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change, as stated in the updated PoA-DD. In the opinion of the validation team, the programme of activity meets all relevant UNFCCC, CDM criteria and all relevant host country criteria.

The review of the PoA-DD /01/ and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The PoA-DD /01/ correctly applies the consolidated methodology ACM0002, version 20 /05/. The monitoring arrangements described in the monitoring plan are feasible within the PoA-DD, and it is validation team's opinion that the CME/CPA Implementer are able to implement the monitoring plan.


During the course of validation ~~one-two~~ (012) CLs and ~~three~~ (032) CARs were identified on initially submitted revised PoA-DD /01/. All the CARs and CL have been resolved by project proponent.

In summary, it is validation team's opinion that the CDM programme of activity "Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam" (UNFCCC Reference number 6095) meets all relevant UNFCCC requirements for the renewal of the PoA period. Hence CCIPL requests the renewal of CDM programme of activities period.

## Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
<u>BM</u>	<u>Build Margin emission factor</u>
CAR	Corrective Action Request
CC IPL	Carbon Check India Pvt. Ltd.
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH <sub>4</sub>	Methane
CL	Clarification Request
<u>CM</u>	<u>Combine Margin emission factor</u>
CME	Coordinating and managing entity
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CPA	Component project activity
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
EPC	Engineering Procurement and Construction
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
LoA	Letter of Approval
MoC	Modalities of Communication
MoV	Means of Verification
MR	Monitoring Report
MW	Mega Watt
ODA	Official Development Assistance
<u>OM</u>	<u>Operating Margin emission factor</u>
PDD	Project Design Document
PE	Project Emission
PoA	Program of Activities
PPA	Power Purchase Agreement
PP(s)	Project Participant(s)
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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



**Carbon Check (India) Private Ltd.**  
**Champok Buragohain**

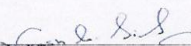
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):


*For following functions:*

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

*In the following Technical Areas:*

TA 1.1	<input checked="" type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input checked="" type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

  
**Mr. Vikash Kumar Singh**  
 Compliance Officer  
  
**Date of Approval**  
 24/12/2019

  
**Mr. Amit Anand**  
 CEO  
  
**Valid Till**  
 23/12/2020

**Revision History of the Document**

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision

<sup>1</sup> India

**CARBON CHECK (INDIA) PRIVATE LIMITED**  
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 Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005  
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 e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)





## Carbon Check (India) Private Ltd.

### Sanjay Agarwalla

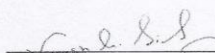
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

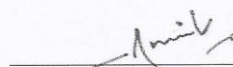
For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input checked="" type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input checked="" type="checkbox"/>	TA 9.2	<input checked="" type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input checked="" type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input checked="" type="checkbox"/>	TA 5.1	<input checked="" type="checkbox"/>	TA 9.1	<input checked="" type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

  
**Mr. Vikash Kumar Singh**  
 Compliance Officer

  
**Mr. Amit Anand**  
 CEO

**Date of Approval**  
 24/12/2019

**Valid Till**  
 23/12/2020

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 Tel: +91 120 4373114 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in)  
 e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	South Pole Carbon	Updated PoA-DD for the PoA 'Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam' in Viet Nam	Version 5 of 05/05/2020 and version 5.1 of 21/05/2020, version 5.2 of 28/05/2020, <a href="#">version 6.0 of 20/07/2020</a>	CME
2	South Pole Carbon	Registered PoA DD for the PoA 'Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam' in Viet Nam	Version 4 of 20/08/2012	CME
3	Bureau Veritas Certification	Validation report for the PoA 'Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam' in Viet Nam	Report no. VIETNAM-VAL/0012/2011, rev 3 dated 10/09/2012	CME
4	UNFCCC	UNFCCC webpage: PoA 6095 : Sustainable Small Hydropower Programme of Activities (PoA) in Viet Nam	<a href="https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/0GLBE2TU91C8VFR6K3HQP7NOIXWJZD/view">https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/0GLBE2TU91C8VFR6K3HQP7NOIXWJZD/view</a>	Others
5	UNFCCC	ACM0002: Grid-connected electricity generation from renewable sources	Version 20	Others
6	UNFCCC	CDM Validation and verification standard for PoA	Version 02 of 29/11/2018	Others
7	UNFCCC	CDM Project Standard for PoA	Version 02 of 29/11/2018	Others
8	UNFCCC	Methodological tool '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- EB 66 Annex 47	Others
9	Socialist Republic of Vietnam	Electricity Law	No. 28/2004/QH11	Others
10	Socialist Republic of Vietnam	Law on Economical and Efficient use of energy	Law No. 50/2010/QH12	Others
11	Ministry of Natural Resources and Environment	Vietnam national electricity grid emission factor for 2018	No: 263/BDKH-TTBVTOD, 12/03/2020	PP
12	UNFCCC	Tool07: Tool to calculate the emission factor for an electricity system	Version 07.0 of 31/08/2018	Others
13	Department of Climate Change - Ministry of Natural Resources and Environment	Emission factor of Vietnam's electricity grid in 2018	<a href="http://www.dcc.gov.vn/tin-tuc/3620/He-so-phat-thai-cua-luoi-dien-Viet-Nam-nam-2018.html">http://www.dcc.gov.vn/tin-tuc/3620/He-so-phat-thai-cua-luoi-dien-Viet-Nam-nam-2018.html</a>	Others
14	Directorate for Standards, Metrology and Quality under	Power meters – Verification/calibration procedure	Decision No. 2739/QD-TDC	PP

	Ministry of Science and Technology of the Socialist Republic of Viet Nam			
15	UNFCCC	Tool for the demonstration and assessment of additionality	Version 07.0.0	Others

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

Table 1. CL from this validation

CL ID	01	Section no.	D.2.4	Date: 20/05/2020
<b>Description of CL</b>				
<i>Kindly clarify the measurement methods and procedure for the parameter TEGy.</i>				
<b>Project participant response</b>				Date: 21/05/2020
<i>The measurement methods and procedure for the parameter TEGy is revised more clearly in the revised PoA - DD.</i>				
<b>Documentation provided by project participant</b>				
<i>The revised PoA-DD</i>				
<b>DOE assessment</b>				Date: 25/05/2020
The parameter TEGy is monitored through dedicated energy meter at generator output which shall represent the total generation from the project activity. This is transparently explained in the PoA DD and hence CL is closed.				

CL ID	02	Section no.	UNFCCC I & R check	Date: 17/07/2020
<b>Description of CL</b>				
<i>The PP is requested to explain how the determination of the grid emission factors under the PoA is in line with "Tool to calculate the emission factor for an electricity system" (version 07.0), in particular:</i>				
<i>(a) With paragraph 99, which requires that steps to determine the CO2 emission factor for an electricity system shall be applied to each CPA, while the grid emission factors (EFgrid,OM,y, EFgrid,BM,y and EFgrid,CM) are set fixed ex-ante at PoA level;</i>				
<i>(b) How the wOM and wBM are set at 0.25 and 0.75 is appropriate for CPAs that will be included during the second PoA renewal period. It is to be noted that the wOM and wBM is linked to crediting period, instead of PoA renewal period;</i>				
<i>(c) With paragraphs 100 and 101, as the PoA-DD does not describe, inter alia, the equations and options used to calculate the emission factor, and the choice of which option to use</i>				
<b>Project participant response</b>				Date: 21/07/2020
<i>PoA-DD is revised accordingly.</i>				
<b>Documentation provided by project participant</b>				
<i>The revised PoA-DD</i>				
<b>DOE assessment</b>				Date: 24/07/2020
PP has updated the PoA-DD in line with the issues above and DOE confirms that updated PoA-DD meets the requirements of the "Tool to calculate the emission factor for an electricity system" (version 07.0). Hence, CL is closed.				

Table 2. CAR from this validation

CAR ID	01	Section no.	D.1.1	Date: 20/05/2020
<b>Description of CAR</b>				
1. Latest PoA-DD template is not used.				
2. Many places the latest version of the 'Tool to calculate the emission factor for an electricity system' is not referred.				



<b>Project participant response</b>	<b>Date:</b> 21/05/2020
1. Latest PoA-DD template has been updated in the revised PoA-DD 2. Latest version of the 'Tool to calculate the emission factor for an electricity system' has been updated in PoA-DD.	
<b>Documentation provided by project participant</b>	
The revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 25/05/2020
The latest PoA-DD template is used and completed all sections following PoA-DD completion guideline. Also, the latest version of the tool 'Tool to calculate the emission factor for an electricity system' is referred in updated PoA-DD. Hence, CAR is closed.	

<b>CAR ID</b>	02	<b>Section no.</b>	D.2.2	<b>Date:</b> 20/05/2020
<b>Description of CAR</b>				
While describing the validity of original baseline using tool "Assessment of the validity of the original/ current baseline and update of the baseline at the renewal of a crediting period", Version 3.0.1 step 1.2 and step 1.3 not described in line with the tool.				
<b>Project participant response</b>				<b>Date:</b> 21/05/2020
Description in Step 1.2 and step 1.3 have been revised in the revised PoA-DD in line with the tool..				
<b>Documentation provided by project participant</b>				
The revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 25/05/2020
CME has updated all applicability conditions in the PoA-DD consistent with the latest methodology and justified the conditions met by the PoA. Hence, CAR is closed.				

Table 3. FAR from this validation

<b>FAR ID</b>		<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
No FAR raised.				
<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

- - - - -

**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.

Decision Class: Regulatory  
Document Type: Form  
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