




**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>	Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems under the Land Bank of the Philippines" (LBP) Carbon Finance Support Facility PoA5979
<b>Number and duration of the next period</b>	2 7 years
<b>Version number of the validation report</b>	1.0
<b>Completion date of the validation report</b>	27/04/2020
<b>Version number of PoA-DD to which this report applies</b>	18.0
<b>Coordinating/managing entity (CME)</b>	Land Bank of the Philippines (LBP)
<b>Host Parties</b>	Republic of the Philippines
<b>Applied methodologies and standardized baselines</b>	AMS-III.D version 21, Methane recovery in animal manure management systems AMS-I.F version 3, Renewable electricity generation for captive use and mini-grid
<b>Mandatory sectoral scopes</b>	AMS-III.D: Sectoral Scope 13: Waste handling and disposal AMS-I.F: Sectoral scope 1: Energy industries (renewable / non-renewable sources)
<b>Conditional sectoral scopes, if applicable</b>	AMS-I.F: Sectoral Scope 13: Waste handling and disposal AMS-III.D: Sectoral scope 1: Energy industries (renewable / non-renewable sources)
<b>Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next programme of activities period</b>	377,805 <sup>1</sup>
<b>Name and UNFCCC reference number of the DOE</b>	TÜV NORD CERT GmbH; E-0022
<b>Name, position and signature of the approver of the validation report</b>	Final Approver Kunal Rami 

<sup>1</sup> Is the sum of ex-ante amount of reductions per annum of each CPA included as of now (CPA5979-P1-0001 to CPA5979-P1-0031)

**SECTION A. Executive summary**

&gt;&gt;

The Landbank of the Philippines has commissioned the TÜV NORD JI/CDM Certification Program to carry out validation of the request for renewal of programme of activities period (RCP) for the programme of activities titled:

**“Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems under the Land Bank of the Philippines” (LBP) Carbon Finance Support Facility”**

with regard to the relevant requirements for CDM programme activities.

The programme has been registered on 10/05/2012 under the UNFCCC registration No. 5979. The PoA period is therefore to be renewed in order to be extended for another 7 year PoA period.

The objective of this RCP validation is the review by an independent entity whether the programme is still compliant with the applicable sections of:

- the CDM project standard for programmes of Activities v2.0,
- the CDM project cycle procedure for Programmes of Activities v2.0
- the updated PoA-DD applied UNFCCC Methodology AMS-III.D version 21 and AMS-I.F version 3, and
- the methodological tool “Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period”, v3.0.1.

As per the requirements of the CDM Validation and Verification Standard for programmes of activities<sup>VVS/</sup> (section 11) the validation is based on

- the registered and/or latest updated version of the PoA-DD (including revisions of the monitoring plan)<sup>PoADD/</sup>,
- further supporting documents made available to the validator as well as
- information collected through performing interviews and during additional research.

Furthermore publicly available information, such as the host country legislation, was considered as far as available and required.

The programme will contribute to reduce GHG emissions due to the implementation of component project activities (CPA) which replace an open anaerobic manure management system with an anaerobic digestion system with methane recovery and combustion. Through construction of the wastewater methane recovery systems, the CPA will reduce GHG emissions from methane compared to the emissions that would have occurred with the open anaerobic system by destruction in a technical facility (gas engine with generator or flare). With the installation of electricity generation units, GHG emissions will be further reduced by replacing grid electrical power sourced from fossil fuel plants with renewable energy from the recovered methane.

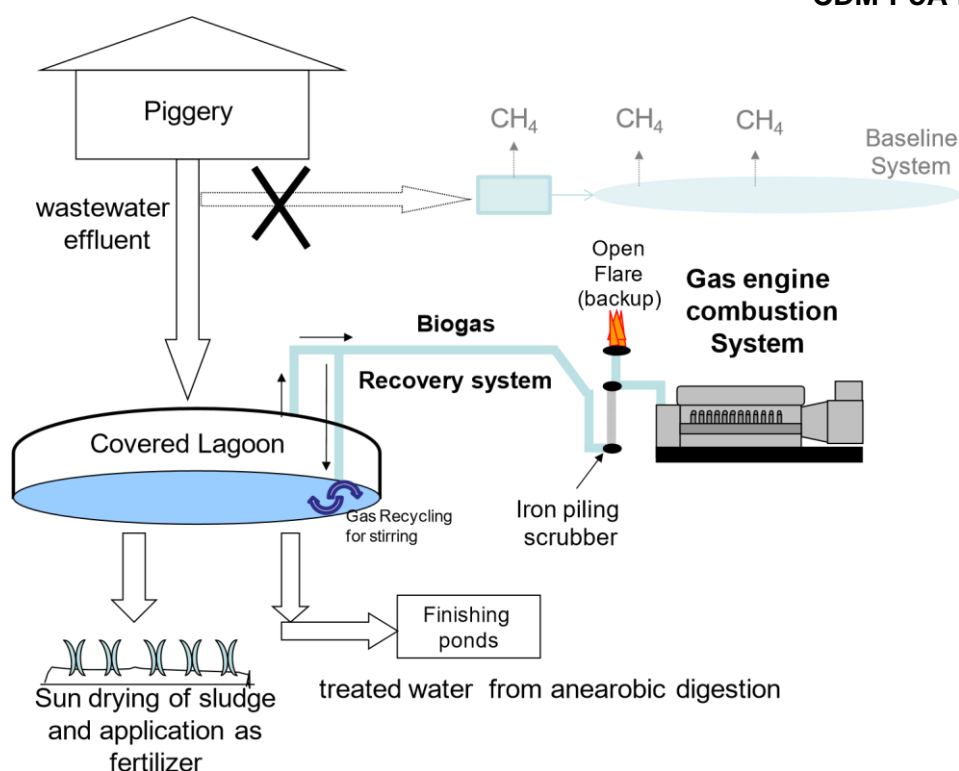
A diagram of a typical component project activity is as following is found below

Details of the project location are given in table A-1 below:

**Table A-1:** Project Location

No.	Project Location
Host Country	Philippines
Region:	All regions of the host country

**Diagram A-1:** Typical component project activity under the PoA



## 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	IR	Winter	Stefan	TÜV NORD CERT GmbH	x	-	x	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	EI	Lubanga	David	-
2.	Approver	IR	Rami	Kunal	TN CERT GmbH

## SECTION C. Means of validation

### C.1. Desk/document review

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During the desk review all documents initially provided by the client and publicly available documents relevant for the validation were reviewed. The main documents are listed below:

- the last revision of the PoA-DD including the monitoring plan<sup>/PoADD/</sup>,
- the last revision of the validation report<sup>/VAL/</sup>,
- documentation of previous verifications<sup>/VER/</sup>
- the monitoring report, including the claimed emission reductions for the project<sup>/MR/</sup>.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

## C.2. On-site inspection

Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY				
No.	Activity performed on-site	Site location	Date	Team member
1.	-			
...				

As per VVS no onsite inspection is required. Besides, TUV NORD and the team leader for this renewal of PoA period has already conducted the inclusion of thirty one CPAs and has been onsite to 24 CPAs during that time.

## C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Calado	Prudencio	LBP	17/01/2020	General set up of the PoA Contracting issues Renewal auditing plan	Stefan Winter
2.	Chua	Susana	The World Bank consultant		General set up of the PoA Changes to the PoA or any CPA therein Status of PoA Renewal auditing plan	
3.	Granadino	Renee	LBP			
4.	Segarra	Amelito	LBP			
5.	Ashida	Keiko	The World Bank			
6.	Van den Berg	Katelijn	The World Bank			

There was a general video conference on the contracting issues and PoA-Status and changes due to ongoing PoA. Besides that any issues have been exchanged via Email due to time difference between PP (The World Bank), DOE and CME (Philippines).

## C.4. Sampling approach

No sampling has been conducted by the PP to collect data for the preparation of documents for the renewal of PoA period.

DOE has also not conducted any sampling in assessing the documents provided and during course of validating the programme of activities renewal of PoA period.

## 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	-	1	-
Post-registration changes	-	-	-
<b>Generic component project activities</b>	-	-	-
Application and selection of methodologies and standardized baselines	1	1	-

Validity of original baseline or its update	-	-	-
Estimated emission reductions or net anthropogenic removals	-	1	-
Validity of monitoring plan	-	4	-
Eligibility criteria for inclusion of CPAs	-	1	-
Others (compliance with policies and law and supporting docs)	-	2	-
<b>Total</b>	<b>1</b>	<b>11</b>	<b>0</b>

## SECTION D. Validation findings

### D.1. Programme of activities

#### D.1.1. Compliance with PoA-DD form

Means of validation	A draft revised PoA-DD was submitted to the validation team by the project participants. By means of the UNFCCC website it has been checked whether the latest applicable PoA-DD template CDM-PoA-DD-FORM has been used. Further it has been checked whether the latest instructions for filling out the PoA-DD template have been followed. Every section has been checked against the respective guidance. The following sources of information have been used in this context: <ul style="list-style-type: none"><li>• /PDD/</li><li>• /unfccc/</li></ul>	
Findings	<input checked="" type="checkbox"/>	The latest reporting template CDM-PoA-DD-FORM as listed on the UNFCCC website has been used for the PoADD.
	<input type="checkbox"/>	The latest instructions for filling out the PoA-DD have been followed. No adverse finding has been identified in the course of this validation.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: - CAR 01
	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
Conclusion	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	Besides, the DOE can confirm that the information transferred from the previous version of the PoA-DD to this latest version is materially the same but the changes applied in the course of updating the PoA-DD for renewal of the programme of activities period.	

#### D.1.2. Programme of activities period

<b>Means of validation</b>	<p>The PoA was registered on 10/05/2012 and the related previous first Programme of activities period is from 10/05/2012 to 09/05/2019.</p> <p>The 2<sup>nd</sup> programme of activities period starts on 10/05/2019 and last until 09/05/2026.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /PDD/</li> <li>• /unfccc/</li> </ul>		
<b>Findings</b>	-		
<b>Conclusion</b>	<p>As per above the 2<sup>nd</sup> programme of activities period starts immediately after the expiration date of the current, previous period.</p> <p>It is further confirmed that the start date (10/05/2019) and the length of the programme period (7 years) are in compliance with the project standard.</p>		

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

<b>Means of validation</b>	<p>The validation team has checked the revised PoA-DD/<sup>PoADD/</sup> and the UNFCCC website/<sup>unfccc/</sup> esp. the latest version of the Modalities of Communication/<sup>MOC/</sup> to check whether the listed project participants have duly been authorized and if communication requirements are met.</p>		
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<b>Findings</b>	<input checked="" type="checkbox"/>	The names of the CME and the project participants as listed in the revised PoA-DD (sections A.4 and A.5. and appendix 1) are consistent with those listed on the dedicated UNFCCC project website as well as in the last version of the modalities of communication/MOC/.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: - CAR 02
<b>Conclusion</b>	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The PoA and the PoA-DD are in line with the related requirements (VVS §384).	

#### 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>	By means of comparison of the PoA-DD with (i) the applied CDM methodology (ii) all applicable CDM Meth tools and (iii) if applicable, a standardized baseline the verification team has checked whether the updated PoA-DD is in compliance with the requirements of the applied methodologies/tools/SB. The following sources of information have been used in this context: <ul style="list-style-type: none"> <li>• /PoADD/</li> <li>• /METH/</li> <li>• /TL/</li> <li>• /unfccc/</li> </ul>			
<b>Findings</b>	<input type="checkbox"/>	The updated PoA-DD is completely in accordance with the approved methodologies applicable for the CDM programme of activities.		
	<input checked="" type="checkbox"/>	The breakdown of PDD accordance of the referenced tools is as follows:		
		1	Title (of the tool)	Tool to calculate project or leakage CO <sub>2</sub> emissions from fossil fuel combustion
		Version		3.0
		MP compliance		<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A (for MP)
		2	Title (of the tool)	Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation
	Version		3.0	

		MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
	3	Title (of the tool)	Project and leakage emissions from anaerobic digesters
		Version	2.0
		MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
	4	Title (of the tool)	Project emissions from flaring
		Version	3.0
		MP compliance	<input type="checkbox"/> full compliance <input checked="" type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
	5	Title (of the tool)	Tool to determine the mass flow of a greenhouse gas in a gaseous stream
		Version	3.0
		MP compliance	<input type="checkbox"/> full compliance <input checked="" type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
	6	Title (of the tool)	Tool to calculate the emission factor for an electricity system
		Version	7.0
		MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
	<input type="checkbox"/>	The breakdown of PDD accordance of the applicable SB is as follows:	
		1	Title (of the SB)
Version			
	MP compliance		
<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:		
	CAR 05 and CAR 08		
<b>Conclusion</b>	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.	
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.	
	<p>By means of checking the UNFCCC website it is confirmed that the selection of the applied methodologies and methodological tools has been done and applied correctly in line with the applicable requirements for the RCP.</p> <p>All applicability conditions of the updated latest methodologies are still met. Thus the methodologies are deemed fully applicable for the new PoA period and no request for deviation with regards to the applicability of the methodology is required.</p> <p>After corrections, it be concluded the compliance are met.</p> <p>No standardised baseline has been applied.</p>		

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

<b>Means of validation</b>	<p>In line with PoA-VVS §382 for the assessment of the validity of the original baseline or its updates the validation team covered the following:</p> <p>(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 PoA period of a registered CDM PoA at the time of requesting the renewal of the PoA period;</p>
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	<p>(b) The correctness of the application of the approved methodologies and, where applicable, the approved standardized baselines and the other methodological regulatory documents for the determination of the continued validity of the baseline or its update, and the estimation of GHG emission reductions or net anthropogenic GHG removals for the applicable PoA period.</p> <p>The requirements contained in paragraph (a) above is not applied to a generic CPA using the valid version of an applicable approved standardized baseline that standardizes the baseline scenario.</p> <p>Accordingly, the DOE has applied the following stepwise approach:</p> <p><i>Step 1:</i> Check of Applicability of a Standardized Baseline</p> <p><i>Step 2:</i> Check of Baseline Scenario</p> <p><i>Step 3:</i> Assessment of compliance of the current baseline with relevant mandatory national and/or sectoral policies</p> <p><i>Step 4:</i> Assessment of impact of circumstances</p> <p><i>Step 5:</i> Assessment of likeliness of investments</p> <p><i>Step 6:</i> Validity check of ex-ante determined parameters.</p> <p>All necessary documentation has been either provided by the client or the validation team has acquired appropriate information required for assessment independently. For a detailed list of reviewed documentation please refer to appendix 3.</p>
<b>CAR Findings</b>	<p><u><i>Step 1: Applicability of a Standardized Baseline:</i></u></p> <p>No standardized baseline is applicable to the project activity. This has been checked by an analysis of the current list of valid standardized baselines on the UNFCCC website <a href="http://unfccc.org">unfccc.org</a>.</p>
	<p><u><i>Step 2: Baseline Scenario:</i></u></p> <p>The baseline scenario of the project as per the registered PoA-DD can be described as follows:</p> <p>As per AMS-III.D, the baseline scenario of the methane recovery component is the situation where, in the absence of the project activity, animal manure is left to decay anaerobically within the project boundary and methane is emitted to the atmosphere.</p> <p>As per AMS-I.F, the baseline emission scenario of the renewable energy generation component is based on the electricity that is displaced from the electricity distribution system by the project activities.</p> <p>As per the project standard this scenario is not subject to re-assessment and is thus deemed to be applicable for the next PoA period.</p> <p>However the baseline itself i.e. the calculation of baseline emissions has been checked regarding the continued validity of underlying assumptions and parameter values. The assessment steps are described in the following subsections.</p>
	<p><u><i>Step 3: Assessment of compliance of the current baseline with relevant mandatory national and/or sectoral policies:</i></u></p> <p>The baseline of the registered PoA-DD has been assessed to be compliant with the national legislation and policies applicable for the project activity at the time of validation. During the first PoA period the PP has frequently reviewed the legal requirements and policies relevant for the baseline of the project. On the basis of this the PP has arrived at the conclusion that the baseline is still in line with all applicable legislations and policies.</p> <p>The validation team has independently reviewed the host country legislation as well as current policies, such as</p> <ul style="list-style-type: none"> <li>• Phil. Clean Water Act of 2004</li> <li>• Clean Air Act of 1999</li> <li>• Philippine Environment Code Presidential Decree No. 1152</li> <li>• Philippine Environmental Policy</li> </ul>



- Presidential Decree No. 1151
- The Water Code of the Philippines  
Presidential Decree No. 1067
  - National Pollution Control Commission  
Presidential Decree No. 984
  - Marine Pollution Decree of 1976  
Presidential Decree No. 979
  - Presidential Decree No. 522
  - Code on Sanitation of the Philippines  
Presidential Decree No. 856
  - Penalty for Improper Garbage Disposal Presidential Decree No. 825
  - Environmental Impact Statement System – Areas/Types of Projects  
Proclamation No. 2146
  - PROCLAMATION NO. 1134
  - PROCLAMATION NO. 1136
  - PROCLAMATION NO. 1127
  - PROCLAMATION NO. 1119
  - JOINT AO DENR-DOST 2006-01
  - Besides, the information on national grid emission factor published by Philippine Department of Energy<sup>/grid/</sup>

On the basis of this analysis the validation team confirms that the baseline is still in compliance with the currently applicable national legislation and other national and/or sectoral policies. No changes have been occurred based on the host country law which would affect the PoA. The requirements from national laws and regulations are the same as during initial request for registration. Therefore the baseline did not need to be adjusted due to changes in this respect.

Step 4: Impact of circumstances:

As the baseline scenario might be affected by changed circumstances, e.g. market conditions, market prices etc. the PP has checked the baseline against such changes that have occurred since validation. This is of special importance if the baseline scenario is the continuation of the pre-project scenario.

One barrier identified during initial registration is related to access to finance. Initially a study by the Agricultural Credit Policy Council from 2009 has been stated. DOE has checked the related webpage of ACPC and found the following in a related study covering the period June 2014 to May 2015 (most recent study available):

Primary reasons why small-scale farmers borrow includes agricultural purposes (buying farm inputs, improving land, etc.) and personal use (household consumption, consumer durables, bills, etc.).

Therefore, the initial statement “farm improvement loans are targeted to agricultural production and facilities given that this is intended to have a positive effect on revenue streams for the farm, but this does not happen with waste management investments.” can still be considered as given. <sup>/ACPC/</sup>

Also, the following statement in the PoA-DD is unchanged: “Farmers interviewed by the Global Methane Initiative study; said they have difficulty of accessing finance because they “are not able to put up enough collateral to secure the loan. In general, Philippine banks don’t want to get involved in chattel mortgages and prefer accepting land as collateral”. According to the interviews conducted with officials from five different banks in the Philippines, “(bank officials) mentioned that chattel mortgages, was not encouraged because it increased the bank’s burden should the borrower default on the loan payment”

The study states that on farmer borrowers the “[...] average interest rates of loans sourced from informal lenders are much higher than those sourced from the formal type.” And additionally the study states that “For formal lenders, the average annual interest rate is 11% for agricultural and 11% non-agricultural loans while for informal

lenders, the rate is 14% for agricultural loans and 11% percent for non-agricultural loans. Majority formal lenders require collateral especially if it involves high amount of loan [...] and "Lenders from both sector experienced various problems such as delayed payment of borrowers, unsecure funds, management issues, and lack of assistance." /ACPC/

Finally, as per report on Bank Lending to Agricultural Sector in 2017 only 1.6% of the Bank Loans granted have been in the Agricultural sector. This is a slight increase to 2016 which states a 1.3% share however the absolut number can still be stated as very low. /ACPC/

Accoridngly the intial circumstances to access to finance are still applicable and those have no impact on the baseline. The installation and operation of an anaerobic open lagoon is still the common practice in the baseline as per assessment above. /ACPC//dna/

Besides, even though the initial baseline is the continuation of current practice also the current practice requires some investment for consutructing a lagoon and related channel system and/or pumping equipment whereas the releated tool requires an assessment "In the situation where the baseline scenario identified at the validation of the project activity was the continuation of the current practice without any investment, [...]".

The validation team has independently checked whether there are changes in circumstances which have an impact on the baseline. No such changes have been identified and thus it is deemed appropriate not to revise the baseline due to changes in circumstances.

#### Step 5: Likeliness of investments

This sub-step should only be applied if the baseline scenario identified at the validation of the project activity was the continuation of use of the current equipment(s) without any investment, so it's not applicable for the project. Besides, see assessment under Step 4 above. No equipment is used in the baseline for electricity generation but taken from the connected grid.

#### Step 6: Validity of ex-ante determined parameters:

The parameters which have been determined ex-ante in the registered PoA-DD are basically still valid. Only the following changes were required:

Parameter	Previous value	Updated value	Reference
EF <sub>CO<sub>2</sub>,y</sub>	No final value given but only the related calculation method	0.6265 tCO <sub>2</sub> e/MWh for the Luzon-Visayas Grid 0.7921 tCO <sub>2</sub> e/MWh for Mindanao Grid	<a href="https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef">https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef</a>
GWP	21 tCO <sub>2</sub> e/tCH <sub>4</sub>	25 tCO <sub>2</sub> e/tCH <sub>4</sub>	IPCC

All other ex-ante parameters are either to be defined on CPA-level or there has been no change to the values as the previous source or supporting document is still valid. These changes have been appropriately considered in the updated PoA-DD. Further, as per check of related webpage of Department of Energy of the Philippines this is the latest data available at time of validation. Besides, the data is correctly stated as per Department of Energy as checked with their webpage which states the values as well as further background info such as Philippine Power Situation Report as well as list of existing power plants in corresponding grids<sup>grid/</sup>.

☒ The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:  
CAR 04, CAR 05

#### Conclusion

☐ No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.

	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		<p>The original baseline scenario of the project as per the registered PDD is still valid for the 2<sup>nd</sup> PoA period.</p> <p>Most of the data and parameters determined ex-ante are still valid except for the emission factor <math>EF_{CO_2,y}</math> and the GWP of methane. The emission factor <math>EF_{CO_2,y}</math> was re-determined for the baseline emission calculation and the GWP for methane has been updated in accordance with IPCC.</p> <p>The grid emission factor is correctly determined by applying weighing factors 0.25 for OM and 0.75 for BM as per latest related tool §86 (b):</p> <p>For Luzon-Visayas Grid: <math>0.25 \times 0.7122 + 0.75 \times 0.5979 = 0.6265 \text{ tCO}_2\text{e/MWh}</math></p> <p>For Mindanao Grid: <math>0.25 \times 0.7797 + 0.75 \times 0.8045 = 0.7983 \text{ tCO}_2\text{e/MWh}</math>.</p> <p>The applied values are therefore correct and determined in line with methodology and related tools.</p>

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

<b>Means of validation</b>		<p>For validation of the estimated GHG emission reductions the client has provided the validation team with the following documentation:</p> <ul style="list-style-type: none"> <li>- Updated PoA-DD<sup>/PoADD/</sup>.</li> </ul> <p>Further, the validation team has downloaded from the UNFCCC website the applicable version of the CDM methodologies and all referenced methodological tools <sup>/unfccc/</sup>.</p> <p>It has been checked whether the results have been correctly transferred to the updated PoA-DD for determination of ex-ante ER. The validation team has further checked the updated PoA-DD against the latest version of the applicable methodologies incl. the referenced methodological tools for consistency. Special focus was laid on the changes against the previous PoA period.</p> <p>The ER calculation process has been duly checked. Further, it has been checked whether the formulae have been correctly transferred to the updated PoA-DD and generic CPA-DD for determination of ex-ante ER.</p> <p>In the updated PoA-DD, the version of methodology AMS-III.D. is changed from 17 to 21 and AMS-I.F from version 2 to 3, via checking the latest version, it is confirmed that no change to the ER calculation from version 17 to 21 or 2 to 3 besides the specification of determination of <math>N_{LT,y}</math> and mass flow of methane in residual gas <math>F_{CH_4,RG,m}</math> to calculate <math>PE_{flare}</math> and determination of flare efficiency as per latest applicable methodological TOOL06.</p> <p>Thus in the updated PoA-DD, there is no change to the formulae of estimated GHG emission reductions which will be used by the specific CPAs for ER calculation.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /PoA-DD/</li> <li>• /METH/</li> <li>• /TL/</li> <li>• /unfccc/</li> </ul>
<b>Findings</b>	<input type="checkbox"/>	The equations to calculate the ERs are as per the applied methodologies. The corresponding calculation tables in the PDD have been checked and no mistakes have been identified.
	<input checked="" type="checkbox"/>	<p>The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:</p> <p>CAR 05, CAR 06, CAR 07, CAR 08</p>
<b>Conclusion</b>	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		As this is the renewal of programme of activities period no ex-ante ER estimation is calculated but the generic equations in line with the methodology to determine the ex-ante ER result at CPA are provided.

## D.2.4. Validity of monitoring plan

<b>Means of validation</b>	<p>The validation team has checked the monitoring plan of the updated PoA-DD against the required changes due to the update of the baseline and other methodological changes. Further, changes due to editorial updates of the applicable templates have been checked.</p> <p>In detail all parameters, ex-ante values and applicable formulae have been checked to determine the required changes for the next PoA period.</p> <p>Besides, based on conducted check of provided supporting documents the validation team has assessed the feasibility of the required changes.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> <li>• /PoA-DD/</li> <li>• /METH/</li> <li>• /TL/</li> <li>• /VER/</li> <li>• /unfccc/</li> </ul>
<b>Findings</b>	<p>The monitoring plan in the PoA-DD has been updated to comply with the latest applicable version of the monitoring methodologies (AMS-III.D ver.21 and AMS-I.F. ver. 3.0). The basic changes from the current PoA period can be summarized as follows:</p> <ul style="list-style-type: none"> <li>- Changes due to use of different parameters in methodology and related tools or different parameter abbreviation or description.</li> <li>- Specification of general ER calculation approach and adding related parameter <math>FV_{RG,m}</math>.</li> </ul> <p><input checked="" type="checkbox"/> The validation team has duly assessed all the required changes due to the upgraded methodological requirements and the re-assessment of the baseline. The validation team has concluded that</p> <ul style="list-style-type: none"> <li>- all necessary changes have been appropriately reflected in the updated PDD,</li> <li>- the monitoring plan in the updated PoA-DD is in compliance with the applied monitoring methodology,</li> <li>- the monitoring arrangements described in the updated PDD can be implemented and are feasible within the project design.</li> </ul> <p><input checked="" type="checkbox"/> The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:</p> <p>CAR 07, CAR 08</p>
<b>Conclusion</b>	<p><input type="checkbox"/> No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.</p> <p><input checked="" type="checkbox"/> The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p> <p>The CME has a team to maintain and operate the PoA and monitor the parameters required by the methodologies. A brief description of responsibilities of the members of the team is included in the updated PoA-DD in section B Management System. The PoA-DD includes a CPA operation plan.</p> <p>Data monitored for CDM purposes will be aggregated, summarized, calculated and recorded until two years after the end of the PoA period. Therefore, the monitoring plan can be implemented and all monitoring arrangements are feasible within the project design.</p> <p>The ex-ante data applied in the monitoring parameters is based on the latest approved PoA-DD, related applied methodologies and tools<sup>/METH/,/TL/</sup>, 2015-2017 National Grid Emission Factor published by the Philippines Department of Energy<sup>/grid/</sup> and IPCC<sup>/IPCC/</sup>. Therefore, is appropriate.</p> <p>Based on DOE's local and sectoral knowledge, the data collecting procedures described in the monitoring plan can fully meet the requirements of the CDM methodology.</p>

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

<b>Means of validation</b>	The DOE has assessed whether the coordinating/managing entity, in accordance with the relevant requirements in the "CDM project standard for programmes of
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	activities”: Updated the eligibility criteria for inclusion of CPAs in the registered CDM PoA. The eligibility criteria for inclusion of CPAs in the PoA-DD is updated compared with the latest approved PoA-DD. The following sources of information have been used in this context: <ul style="list-style-type: none"> <li>• /PoA-DD/</li> <li>• /METH/</li> <li>• /TL/</li> <li>• /unfccc/</li> </ul>	
<b>Findings</b>	<input checked="" type="checkbox"/>	DOE can confirm based on its assessment and document check that the eligibility criteria for inclusion of CPAs in the updated CDM PoA is not changed comparing with the latest approved PoA-DD according to the relevant requirements in the “CDM project standard for programmes of activities” considering the use of latest version of methodology, methodological tools and/or applied standardized baseline, original and updated baseline, current national legislation and/or sectoral policies and circumstances, estimation of GHG emission reductions and validity of the monitoring plan.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:
		CAR 09
<b>Conclusion</b>	<input type="checkbox"/>	No CARs / CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs / CLs have been addressed appropriately. The CME has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		The eligibility criteria for inclusion of CPAs in the PoA-DD is updated compared with the latest approved PoA-DD. Besides editorial updates, the criteria have been updated to be fully consistent with the description of the applicability criteria as per related applied methodology versions. Further, no changes and updates have been conducted. Thus the latest approved PoA-DD has complied with the latest applicable versions of the methodologies. No further changes to the eligibility criteria are required. It is note that the applicability criteria as per AMS-III.D v21 §5 and 6 and AMS-I.F §4 as no hydro, §9 and §10 as no combined heat and power generation and §11 as no biomass is used, are not provided in the PoA-DD as they are not applicable to the PoA.

## SECTION E. Internal quality control

Before the submission of the final VAL RCP report a technical review of the whole validation procedure was carried out. The technical reviewers are competent GHG auditors being appointed for the scope this project falls under. The technical reviewers are not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may have been confirmed or revised. Furthermore reporting improvements might have been achieved.

After the successful technical review an overall (esp. procedural) assessment of the complete validation has been carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the submission for requesting the renewal of programme of activities period is conducted.

**SECTION F. Validation opinion**

The Landbank of the Philippines has commissioned the TÜV NORD JI/CDM Certification Program to re-validate the programme of activities "*Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems under the Land Bank of the Philippines*" (LBP) Carbon Finance Support Facility" for the purpose of renewal of the programme of activities period. The validation is based on the relevant UNFCCC requirements.

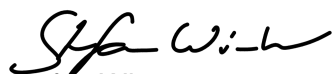
The review of the updated PoA design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews have provided TÜV NORD JI/CDM Certification Program with sufficient evidence to validate the fulfilment of the stated criteria applicable for RCP.

In detail the conclusions can be summarized as follows:

- (i) The updated PoA-DD has been completed using the valid version of the applicable PoA-DD form, following the instructions therein;
- (ii) The information transferred to the later valid version of the PoA-DD form is materially the same as that in the registered PoA-DD;
- (iii) The methodologies were applied in accordance with the applicable requirements in the "CDM project standard for programmes of activities";
- (iv) The baseline, the estimated GHG emission reductions or net anthropogenic GHG removals, and the monitoring plan in the updated PoA-DD comply with the applicable requirements in the "CDM project standard for programmes of activities", and the valid versions of the methodologies and, where applicable, the standardized baselines that are applicable to the PoA;
- (v) The next duration of the PoA commences on the day immediately after the expiration of the current duration;
- (vi) The names of the coordinating/managing entity and the project participants in the updated PoA-DD are consistent with the names of the coordinating/managing entity and the project participants in the latest version of the MoC statement;
- (vii) Updated the eligibility criteria for inclusion of CPAs in the registered CDM PoA;
- (viii) The current baseline of the programme of activities is in line with the national and/or sectoral policies and circumstances at the time of requesting renewal of programme of activities period.
- (ix) The monitoring plan is transparent and adequate and in line with the applicable monitoring methodology (AMS-III.D version 21.0 and AMS-I.F version 03.0).

The conclusions of this report show, that the PoA, as it was described in the programme of activities documentation, is in line with all CDM criteria applicable for the renewal of the PoA.

Essen, 27/04/2020




Stefan Winter  
TÜV NORD JI/CDM Certification Program  
Validation Team Leader

## Appendix 1. Abbreviations

Abbreviations	Full Texts
BAU	Business as usual
BM	Build Margin
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CFSF	Carbon Finance Support Facility
CL	Clarification Request
CM	Combined Margin
CME	Coordinating / Managing Entity
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
COP/MOP	Conference of Parties / Meeting of Parties
CP	Certification Program
CRECOM	Land Bank of the Philippines Credit Commission Board
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
EIA	Environmental Impact Assessment
ECC	Environmental Compliance Certificate
EMB	Environmental Management Bureau
FAR	Forward Action Request
GE	General Electric
GHG	Greenhouse gas(es)
GT	Glossary of Terms
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
LBP	Land Bank of the Philippines
MOA	Memorandum of agreement
MoC	Modalities of Communication
MP	Monitoring Plan
OM	Operating Margin
ONS	National Operator of the Electric System
OSV	On-site visit
PA	Project Activity
PoA	Programme of Activities
PoA-DD	CDM Programme of Activities Design Document
PP	Project Participant(s)
QA/QC	Quality assurance/Quality control
UNFCCC	United Nations Framework Convention on Climate Change

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



**Statement of Competence**  
Appointment and authorization according to the procedures of the TÜV NORD JICDM Certification Program.

**Mr. Stefan Winter**


SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2020-07-27
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2020-07-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal energy generation
1.2	Renewables
2.1	Energy distribution
3.1	Energy demand
4.1	Cement and lime production
4.2	Paper
5.2	Caprolactam, nitric and adipic acid
9.1	Aluminium and magnesium production
9.2	Iron, steel and Ferro-alloy production
13.1	Solid waste and wastewater
13.2	Manure

163 – Rev. 5, Date: 2017-07-20

163\_001-VANDP-F20\_2017-07-20\_rev5



**Statement of Competence**  
Appointment and authorization according to the procedures of the TÜV NORD JICDM Certification Program.

**Mr. David Lubanga**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2021-10-20
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2021-10-20

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand
13.2	Manure

251 - Rev. 7, Date: 2018-10-19

251\_001-VANDP-F20\_2018-10-19\_rev7.doc

## Appendix 3. Documents reviewed or referenced

No.	Reference	Author	Title	References to the document	Provider
1.	<b>/PoADD-T/</b>	UNFCCC	Component project activity design document form for CDM component project activities (CDM-CPA-DD-FORM) –version 9.0	<a href="https://cdm.unfccc.int/Reference/PDs_Forms/index.html">https://cdm.unfccc.int/Reference/PDs_Forms/index.html</a>	Other
2.	<b>/CPM/</b>	DOE	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)	-	Other
3.	<b>/GOT/</b>	UNFCCC	Glossary “CDM terms” – version 10.0	<a href="https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu">https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu</a>	Other
4.	<b>/IPCC/</b>	IPCC	1. 1996 IPCC Guidelines for National	<a href="http://www.ipcc-">www.ipcc-</a>	Other



No.	Reference	Author	Title	References to the document	Provider
			Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	<a href="http://nggip.iges.or.jp">nggip.iges.or.jp</a>	
5.	<b>/KP/</b>	UNFCCC	Kyoto Protocol (1997)	<a href="http://unfccc.int/kyoto_protocol/items/2830.php">http://unfccc.int/kyoto_protocol/items/2830.php</a>	Other
6.	<b>/MA/</b>	UNFCCC	Decision 3/CMP. 1 (Marrakesh – Accords)	<a href="http://cdm.unfccc.int/Reference/CO2PMOP/index.html">http://cdm.unfccc.int/Reference/CO2PMOP/index.html</a>	Other
7.	<b>/METH/</b>	UNFCCC	AMS-III.D. ver. 21.0: Methane recovery in animal manure management systems  AMS-I.F. ver. 3.0: Renewable electricity generation for captive use and mini-grid	<a href="https://cdm.unfccc.int/methodologies/DB/2C25M4WA2W2XCMG5ETXE2CBHZOPRZU">https://cdm.unfccc.int/methodologies/DB/2C25M4WA2W2XCMG5ETXE2CBHZOPRZU</a> <a href="https://cdm.unfccc.int/methodologies/DB/9KJWQ1G0WEG6LKH21MLPS8BQR7242">https://cdm.unfccc.int/methodologies/DB/9KJWQ1G0WEG6LKH21MLPS8BQR7242</a>	Other
8.	<b>/TL/</b>	UNFCCC	Methodological Tools: - “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” version 3.0, - “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation” version 3.0, - “Project and leakage emissions from anaerobic digesters” version 2.0, - “Project emissions from flaring” version 3.0, - “Tool to determine the mass flow of a greenhouse gas in a gaseous stream” version 3.0, - “Tool to calculate the emission factor for an electricity system” version 7.0 - “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	<a href="http://cdm.unfccc.int/Reference/tools/index.html">http://cdm.unfccc.int/Reference/tools/index.html</a>	Other
9.	<b>/POAS/</b>	UNFCCC	Standard for demonstration of additionality, development of eligibility criteria and Application of Multiple Methodologies for Programme of Activities – version 04.0	<a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
10.	<b>/PS/</b>	UNFCCC	CDM project standard for programmes of activities version 2.0	<a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
11.	<b>/SAMPLE/</b>	UNFCCC	- Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities – version 04.0 - Standard for Sampling and Surveys for CDM Project Activities and Programme Activities – version 8.0	<a href="https://cdm.unfccc.int/Reference/Guidelines/index.html">https://cdm.unfccc.int/Reference/Guidelines/index.html</a> <a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other
12.	<b>/VVS/</b>	UNFCCC	CDM validation and verification standard for programmes of activities version 2.0	<a href="http://cdm.unfccc.int/Reference/Standards/index.html">http://cdm.unfccc.int/Reference/Standards/index.html</a>	Other

No.	Reference	Author	Title	References to the document	Provider
13	/CON/	DOE	Signed Contract for carrying out the validation of the PoA Renewal of CP among TÜV Nord and LandBank of the Philippines		Other
14	/ACPC/	ACPC	Costs of Agricultural Credit and Interest Rate Sensitivity of Small Farmers: An Empirical Study, Agricultural Credit Policy Council, Agham C. Cuevas, DURATION: June 11, 2014 – May 10, 2015  Report: 2017 BANK LENDING TO AGRICULTURE	<a href="http://www.acpc.gov.ph/wp-content/uploads/2017/05/Cost-of-Agricultural-Credit.pdf">http://www.acpc.gov.ph/wp-content/uploads/2017/05/Cost-of-Agricultural-Credit.pdf</a>  <a href="http://www.acpc.gov.ph/wp-content/uploads/2018/11/2017-Bank-Lending-to-Agriculture.pdf">http://www.acpc.gov.ph/wp-content/uploads/2018/11/2017-Bank-Lending-to-Agriculture.pdf</a>	Other
18	/EL/	-	<u>Environmental Legislation:</u> <ul style="list-style-type: none"> <li>- Phil. Clean Water Act of 2004</li> <li>- Clean Air Act of 1999</li> <li>- Philippine Environment Code Presidential Decree No. 1152</li> <li>- Philippine Environmental Policy Presidential Decree No. 1151</li> <li>- The Water Code of the Philippines Presidential Decree No. 1067</li> <li>- National Pollution Control Commission Presidential Decree No. 984</li> <li>- Marine Pollution Decree of 1976 Presidential Decree No. 979</li> <li>- Presidential Decree No. 522</li> <li>- Code on Sanitation of the Philippines Presidential Decree No. 856</li> <li>- Penalty for Improper Garbage Disposal Presidential Decree No. 825</li> <li>- Environmental Impact Statement System – Areas/Types of Projects Proclamation No. 2146</li> <li>- PROCLAMATION NO. 1134</li> <li>- PROCLAMATION NO. 1136</li> <li>- PROCLAMATION NO. 1127</li> <li>- PROCLAMATION NO. 1119</li> <li>- JOINT AO DENR-DOST 2006-01</li> </ul>	<a href="http://www.chanrobles.com/legal9.htm#.Vq3Ma13UjIU">http://www.chanrobles.com/legal9.htm#.Vq3Ma13UjIU</a> <a href="http://www.denr.gov.ph/laws-and-policies.html">http://www.denr.gov.ph/laws-and-policies.html</a>	Other
25	/LOA/	DNA	Letter of Approval for PoA	-	Other
28	/POADD/	PP	Programme of Activities: “Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems under the Land Bank of the Philippines’ (LBP) Carbon Finance Support Facility” version 15 – 18/05/2015 version 16 – 31/05/2017 version 17 – 14/01/2020 version 18 – 10/02/2020 forwarded 02/04/2020 version 18 – 10/02/2020 forwarded	-	PP UNFCCC

No.	Reference	Author	Title	References to the document	Provider
			03/04/2020 version 18 – 10/02/2020 forwarded 06/04/2020 version 18 – 10/02/2020 forwarded 14/04/2020 version 18 – 10/02/2020 forwarded 20/04/2020 version 18 – 10/02/2020 forwarded 22/04/2020		
31	<b>/TD/</b>	PP	<u>Project technical description:</u> <ul style="list-style-type: none"> <li>- Technical Specification of Generator received via email from technology supplier dated 05 April 2018</li> <li>- Farm layout (scanned paper)</li> <li>- Project Layout</li> <li>- Google earth picture of the farm</li> <li>- Technical diagram and presentation of project activity</li> <li>- Technical description of the biodigester supplied by Alterna Verde Corporation</li> <li>- Email dtd 05/04/2018 by Project Technical Support Engineer</li> </ul>	-	PP
32	<b>/INV/</b>	PP	<ul style="list-style-type: none"> <li>- Pig projection</li> <li>- Sales invoices/Records of pigs sold including weight of animals</li> </ul>	-	PP
33	<b>/SNV/</b>	SNV	Feasibility Study titled: "Feasibility Study of a National Biogas Program on Domestic Biogas in the Philippines." by SNV Netherlands Development Organization and Winrock International. April 2010.	-	PP
34	<b>/dna/</b>	-	Republic of the Philippines Environmental Management Bureau	<a href="http://emb.gov.ph/">http://emb.gov.ph/</a>	Other
35	<b>/ipcc/</b>	-	IPCC publications	<a href="http://www.ipcc-nggip.iges.or.jp">www.ipcc-nggip.iges.or.jp</a>	Other
36	<b>/unfccc/</b>	-	UNFCCC	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	Other
37	<b>/pagasa/</b>	-	Philippine Atmospheric Geophysical & Astronomical Services Administration (PAGASA)	<a href="http://www.pagasa.dost.gov.ph/">http://www.pagasa.dost.gov.ph/</a>	Other
38	<b>/grid/</b>	-	<ul style="list-style-type: none"> <li>- Philippine Department of Energy</li> <li>- Link to data for the national grid emission factor for Luzon-Visayas and Mindanao Grid</li> <li>- 2016 Philippine Power Situation Report by Electric Power Industry Management Bureau, Department of Energy</li> <li>- List of existing power plants Luzon Grid as of Dec 2019</li> <li>- List of existing power plants Mindanao grid as of June 2019</li> <li>- List of existing power plants Visayas Grid as of June 2019</li> <li>- List of existing off-grid power plants Luzon, Visayas and Mindanao grid as of June 2019</li> </ul>	<a href="https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef">https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef</a> <a href="https://www.doe.gov.ph/sites/default/files/pdf/electric_power/power_situationer/2016_philippine_power_situation_report.pdf">https://www.doe.gov.ph/sites/default/files/pdf/electric_power/power_situationer/2016_philippine_power_situation_report.pdf</a> <a href="https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef?q=list-">https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef?q=list-</a>	Other

No.	Reference	Author	Title	References to the document	Provider
				<a href="#">existing-power-plants</a>	

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

Table 2. CL from this validation

CL ID	01	Section no.	I.2	Date: 24/01/2020
<b>Description of CL</b>				
Please clarify whether the provided data to justify the AMS-III.D applicability criteria as per §2 c of the methodology w.r.t. mean temperature is still correct. Please also provide clarification and specification were at the provided webpage the related data can be found.				
<b>Project participant response</b>				Date: 19/02/2020
Yes, the provided information is still correct and can be found at <a href="http://bagong.pagasa.dost.gov.ph/information/climate-philippines">http://bagong.pagasa.dost.gov.ph/information/climate-philippines</a> (p. 15 of revised PoA-DD).				
<b>Documentation provided by project participant</b>				
Revised PoA-DD				
<b>DOE assessment</b>				Date: 03/03/2020
Ok. As per related webpage by government of Philippines the mean annual temperatures is 26.6°C. The coolest place at 1,500m elevation has a mean annual temperature of 18.3°C. Therefore, the criterion is still correct. Finding closed.				
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Table 2. CAR from this validation

CAR ID	01	Section no.	A.4	Date: 24/01/2020
<b>Description of CAR</b>				
Following issues w.r.t. filling the PoA-DD as per instructions have been identified:				
<ol style="list-style-type: none"> <li>Under section A.4 of the PoA-DD it is stated that "Other participants to the PoA: Kingdom of Spain - Ministry of Environment and Rural Affairs; Ministry of Economy and Finance" whereas as per instructions to fill the DD only the name the CME of the Poa is requested to be provided. Please clarify and correct accordingly.</li> <li>Section C: The link provided under footnote 14 does not provide the related document but an error page. Pls check and revise accordingly.</li> <li>D.2: As per instructions, the Duration shall be provided in years and months whereas only years are stated as of now. Pls correct accordingly.</li> <li>Appendix 1: Clarify why only details on the CME and one PP is given whereas there are additional PPs stated in section A.4 and A.5 of the PoA-DD.</li> </ol>				
<b>Project participant response</b>				Date: 03/02/2020
On item:				
<ol style="list-style-type: none"> <li>Section A.4 of the PoA-DD was revised to reflect only the name of the CME (p. 4 of revised PoA-DD)</li> <li>Section C of the PoA-DD was revised for footnote 14 providing the reference. (p. 10 of revised PoA-DD)</li> <li>Section D.2 of the PoA-DD was revised to reflect a duration of 28 years, 0 months. (p. 12 of revised PoA-DD)</li> <li>The PP mentioned in Appendix 1 as trustee of the Spanish Carbon Fund and is designated as focal point in the MOC for the other participants.</li> </ol>				
<b>Documentation provided by project participant</b>				
Revised PoA-DD				
<b>DOE assessment</b>				Date: 03/03/2020

1. Ok. The related reference to Other Participants has been deleted from section A.4. 2. Not Ok. The link has been revised by the actual Reference. Please provide the related document stated. 3. Ok. Section D.2 has been revised accordingly and updated PoA-DD states now the duration in years and month. 4. Not ok. As per instructions a complete table has to be provided for "each of the CME and the PPs listed in section A.4 and A.5". Therefore, currently the information provided is not complete as A.5 states further PPs.	
<b>Project participant response</b>	<b>Date:</b> 06/03/2020
On item: 2. Please see copy of reference, "Feasibility Study of A National Biogas Programme on Domestic Biogas in the Philippines." 4. All the missing PPs have been added to Appendix 1.	
<b>Documentation provided by project participant</b>	
Revised PoA-DD, copy of actual reference	
<b>DOE assessment</b>	<b>Date:</b> 01/04/2020
2. OK. The related source document has been provided and the related statement as per PDD is found in this document. 4. Ok. Related tables for all PPs as per A.4 and A.5 have been now provided. The list is complete as per related UNFCCC project webpage and related MOCs found and checked. 5. Not ok. Description of flaring tool title is not consistent throughout the PoA-DD. Revision requested.	
<b>Project participant response</b>	<b>Date:</b> 20/04/2020
5. Corrected	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 22/04/2020
5. OK. The title of the related tool is now consistent throughout the PoA-DD. As all outstanding issues have been resolved this finding is closed.	

<b>CAR ID</b>	<b>02</b>	<b>Section no.</b>	<b>A.5</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				
The PoA-DD in section A.5 states the following PPs: <ul style="list-style-type: none"> <li>• International Bank for Reconstruction and Development (IBRD) as Trustee of the Spanish Carbon Fund (SCF) Multilateral Fund</li> <li>• Kingdom of Spain- Ministry of Environment and Rural Affairs; Ministry of Economy and Finance</li> <li>• Norwegian Ministry of Climate and Environment</li> </ul> Whereas the PPs stated on the related UNFCCC PoA webpage and MOCs found there are as following: <ul style="list-style-type: none"> <li>• International Bank for Reconstruction (IBRD) and Development as Trustee of the Spanish Carbon Fund (SCF) ;</li> <li>• Kingdom of Spain – Ministry for the Ecological Transition &amp; Ministry of Economy and Business;</li> <li>• Norwegian Ministry of Climate and Environment</li> <li>• Swedish Energy Agency (until 31/12/2022)</li> </ul> Please clarify the inconsistency and correct accordingly.				
<b>Project participant response</b>				<b>Date:</b> 19/02/2020
The document was revised to include Swedish Energy Agency (until 31/12/2022). (p. 4 of revised PoA-DD) and revised from Kingdom of Spain- Ministry of Environment and Rural Affairs; Ministry of Economy and Finance to Kingdom of Spain – Ministry for the Ecological Transition & Ministry of Economy and Business; International Bank for Reconstruction and Development (IBRD) as Trustee of the Spanish Carbon Fund (SCF) Multilateral Fund to International Bank for Reconstruction (IBRD) and Development as Trustee of the Spanish Carbon Fund (SCF) (p.4 of revised PoA-DD).				
<b>Documentation provided by project participant</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 03/03/2020
Ok. The PoA-DD section A.5 has been revised accordingly. The PPs provided in A.5 are now consistent with related UNFCCC PoA webpage with active participants. Finding closed.				
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

<b>CAR ID</b>	<b>03</b>	<b>Section no.</b>	<b>I.2</b>	<b>Date:</b> 24/01/2020
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Description of CAR	
The applicability criteria stated under section I.2 of the PoA-DD are not fully consistent with the applicability criteria as given in the applied methodologies.	
PoA-DD I.2	Methodology
	AMS-III.D.
The final sludge must be handled aerobically. In case of soil application of the final sludge, the proper conditions and procedures (i.e., not resulting in methane emissions) must be ensured.	The residual waste from the animal manure management system shall be handled aerobically, otherwise the related emissions shall be taken into account as per relevant procedures of "AMS-III.AO Methane recovery through controlled anaerobic digestion". In the case of soil application, proper conditions and procedures (not resulting in methane emissions) must be ensured;
The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester.	The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester. If the project proponent can demonstrate that the dry matter content of the manure when removed from the animal barns is larger than 20%, this time constraint will not apply.
All type III components of the project activity result in aggregate emission reductions of less than or equal to 60,000 tCO <sub>2</sub> -e/yr.	Measures are limited to those that result in aggregate emission reductions of less than or equal to 60 kt CO <sub>2</sub> equivalent annually from all Type III components of the project activity.
Not provided	New facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the "General Guidelines to SSC CDM methodologies".
Not provided	The requirements concerning demonstration of the remaining lifetime of the replaced equipment shall be met as described in the "General guidelines for SSC CDM methodologies".
	AMS-I.F
Missing	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: (a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir; (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> ; (c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m <sup>2</sup> .

<p>This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to user(s). The project activity will displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit i.e., in the absence of the project activity, the users would have been supplied electricity from one or more sources listed below:</p> <p>(a) A national or a regional grid (grid hereafter);</p> <p>(b) Fossil fuel fired captive power plant;</p> <p>(c) A carbon intensive mini-grid.</p>	<p>This methodology is applicable for project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition,<sup>3</sup> (c) Involve a retrofit<sup>4</sup> of (an) existing plant(s); or (d) Involve a replacement<sup>5</sup> of (an) existing plant(s).</p>
<p>For project activities that seek to retrofit or modify an existing facility for renewable energy generation, the total output of the modified or retrofitted unit shall not exceed the limit of 15MW.</p>	<p>In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.</p>
<p>For units with renewable and non-renewable energy components, the eligibility limit of 15 MW for a small scale CDM project activity applies only to the renewable energy component.</p>	<p>If the unit added has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel,<sup>7</sup> the capacity of the entire unit shall not exceed the limit of 15 MW.</p>
<p>In case electricity produced by the project activity is delivered to another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the electricity will have to be entered into specifying that only the facility generating the electricity can claim emission reductions from the electricity displaced.</p>	<p>If electricity and/or steam/heat produced by the project activity is delivered to a third party, i.e. another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered that ensures that there is no double counting of emission reductions.</p>
<p>Missing</p>	<p>In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.</p>
<p>Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid) .</p>	<p>Illustration of respective situations under which each of the methodology (AMS-I.D., AMS-I.F. and AMS-I.A.2) applies is included in Table 3.</p>
<p>For units that co-fire fossil fuel, the capacity of the entire unit shall not exceed 15 MW.</p>	<p>Integrated in criteria AMS-I.F §8 under version 3.</p>

Further clarify why AMS-III.D. § 5 and 6 and AMS-I.F. §4 criteria are not provided even though they would be not applicable. Besides AMS-I.F. §30 table 3 is not considered.

<b>Project participant response</b>	<b>Date:</b> 19/02/2020
<p>As observed, the applicability criteria of AMS-III.D. § 5 and 6 and AMS-I.F. §4 not applicable to the project activities were not included in earlier version of PoA-DD, as this were also not included in the latest registered PoA-DD version 16. As suggested, the applicability criteria stated under section I.2 of the PoA-DD are now consistent with the applicability criteria as given in the related methodologies and were revised to use exact wording in the methodologies and as suggested above. It now includes even the criteria of AMS-III.D. § 5 and 6 and AMS-I.F. §4 that are not applicable as required by the DOE.(pp.15-18 of revised PoA-DD). AMS-I.F. §30 table 3 is now explicitly stated in the applicability criteria in section I.2 of the revised PoA-DD.(p.17)</p>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 03/03/2020

Ok. The PoA-DD has been revised accordingly. All applicability criteria are now fully consistent with the related methodologies. Further, a complete list as per methodologies has been provided and for those which are not relevant the correct justification is provided as "not applicable". AMS-I.F. §30 table 3 is considered in the justification of related applicability criteria number 2.  
As all issues are resolved this finding is closed.

<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed
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<b>CAR ID</b>	<b>04</b>	<b>Section no.</b>	<b>I.5</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				
As per PoA-PS §289 and 291 the CME is required to assess the impact of national and/or sectoral policies and circumstances as well as provide justification w.r.t. the steps provided in the "Methodological tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period". However, the same could not be identified in the PoA-DD and related response is requested along with supporting documents (refer §297 PoA-PS).				
<b>Project participant response</b>				<b>Date:</b> 19/02/2020
The CME followed latest PoA-PS (version 2) paragraph 289 which states "289. The coordinating/managing entity shall assess and incorporate the impact of national and/or sectoral policies and circumstances existing at the time of requesting renewal of the PoA period on the modalities to estimate baseline GHG emissions for the subsequent crediting period of each corresponding CPA, <b>without reassessing the baseline scenario</b> ". Following paragraph 289, the national/and/or sectoral policies existing at the time of the renewal are assessed and are found the same as in the first crediting period and thus will not have any impact on the modalities to estimate baseline GHG emissions for the subsequent crediting period of each corresponding CPA. Steps 1.2-1.3 are now applied in section I.5 (pp.21-22 of revised PoA-DD). For PoA-PS version 2 paragraph 291 which states that "291. If data and parameters used for determining the original baseline, that were determined ex ante and not monitored during the PoA period, are no longer valid, the coordinating/managing entity shall update such data and parameters in accordance with Step 1.4 of the "Methodological tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period"; the coordinating/managing entity has updated such data and parameters in accordance with the tool: the updated parameters such as GWP, EF as well as a check on other parameters like $W_{\text{default}}$ , Bo, VS default values as per IPCC were done (and found to be the same)				
<b>Documentation provided by project participant</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 03/03/2020



DOE checked the updated PDD and can confirm that now related reference, description and assessment w.r.t. §289-291 has been included in the PoA-DD esp section I.5.

The original baseline scenario of the project as per the registered PDD is still valid for the 2<sup>nd</sup> PoA period. VT has checked related national laws and regulations. On the basis of this analysis the validation team confirms that the baseline is still in compliance with the currently applicable national legislation and other national and/or sectoral policies. No changes have been occurred based on the host country law which would affect the PoA. The requirements from national laws and regulations are the same as during initial request for registration. Therefore the baseline did not need to be adjusted due to changes in this respect. As the baseline scenario might be affected by changed circumstances, e.g. market conditions, market prices etc. the PP has checked the baseline against such changes that have occurred since validation. This is of special importance if the baseline scenario is the continuation of the pre-project scenario.

One barrier identified during initial registration is related to access to finance. Initially a study by the Agricultural Credit Policy Council from 2009 has been stated. DOE has checked the related webpage of ACPC and found the following in a related study covering the period June 2014 to May 2015 (most recent study available):

Primary reasons why small-scale farmers borrow includes agricultural purposes (buying farm inputs, improving land, etc.) and personal use (household consumption, consumer durables, bills, etc.).

Therefore, the initial statement "farm improvement loans are targeted to agricultural production and facilities given that this is intended to have a positive effect on revenue streams for the farm, but this does not happen with waste management investments." can still be considered as given. /ACPC/

Also, the following statement in the PoA-DD is unchanged: "Farmers interviewed by the Global Methane Initiative study; said they have difficulty of accessing finance because they "are not able to put up enough collateral to secure the loan. In general, Philippine banks don't want to get involved in chattel mortgages and prefer accepting land as collateral". According to the interviews conducted with officials from five different banks in the Philippines, "(bank officials) mentioned that chattel mortgages, was not encouraged because it increased the bank's burden should the borrower default on the loan payment"

The study states that on farmer borrowers the "[...] average interest rates of loans sourced from informal lenders are much higher than those sourced from the formal type." And additionally the study states that "For formal lenders, the average annual interest rate is 11% for agricultural and 11% non-agricultural loans while for informal lenders, the rate is 14% for agricultural loans and 11% percent for non-agricultural loans.

Majority formal lenders require collateral especially if it involves high amount of loan [...]" and "Lenders from both sector experienced various problems such as delayed payment of borrowers, unsecure funds, management issues, and lack of assistance." /ACPC/

Finally, as per report on Bank Lending to Agricultural Sector in 2017 only 1.6% of the Bank Loans granted have been in the Agricultural sector. This is a slight increase to 2016 which states a 1.3% share however the Absolut number can still be stated as very low. /ACPC/

Accordingly the initial circumstances to access to finance are still applicable and those have no impact on the baseline. The installation and operation of an anaerobic open lagoon is still the common practice in the baseline as per assessment above. /ACPC/dna/

Besides, even though the initial baseline is the continuation of current practice also the current practice requires some investment for constructing a lagoon and related channel system and/or pumping equipment whereas the related tool requires an assessment "In the situation where the baseline scenario identified at the validation of the project activity was the continuation of the current practice without any investment, [...]"

The validation team has independently checked whether there are changes in circumstances which have an impact on the baseline. No such changes have been identified and thus it is deemed appropriate not to revise the baseline due to changes in circumstances.

Most of the data and parameters determined ex-ante are still valid except for the emission factor  $EF_{CO_2,y}$  and the GWP of methane. The emission factor  $EF_{CO_2,y}$  was re-determined for the baseline emission calculation and the GWP for methane has been updated in accordance with IPCC.

Finding is closed.

#### Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)  
☒ The finding is closed

CAR ID	05	Section no.	I.6.2	Date: 24/01/2020
Description of CAR				

1. For parameter $W_{\text{default}}$ reference is made to IPCC default tables. However, it is not mentioned which Volume and Chapter of the IPCC Guidelines. Please specify.
2. For parameter $GWP_{\text{CH}_4}$ reference is made that the source would be AMS-III.D ("As per methodology"). However, related latest version of AMS-III.D does not provide related value anywhere. Pls clarify and correct accordingly.
3. Flare efficiency: The description under choice of data is inconsistent with section I.7.2 related parameter.
4. Please clarify why $SPEC_{\text{flare}}$ is not considered as an ex-ante fixed parameter in line with related TOOL06.
<b>Project participant response</b> <span style="float: right;"><b>Date:</b> 19/02/2020</span>
1. For parameter $W_{\text{default}}$ reference is IPCC default Tables 10 A-7 & A-8 of IPCC 2006 Vol.4 Chapter 10 Emissions from livestock and manure management. This is now specified in the PoA-DD. (p. 29 of the Revised PoA-DD)
2. For parameter $GWP_{\text{CH}_4}$ reference is default value from IPCC. This is now revised in the PoA-DD. (p. 32 of the Revised PoA-DD)
3. Flare efficiency: The parameter was revised to FE. The description under choice of data is now consistent with section I.7.2 related parameter. (p. 31 of the Revised PoA-DD)
4. $SPEC_{\text{flare}}$ is now included as an ex-ante fixed parameter in line with related Tool 06. (p. 31 of the Revised PoA-DD)
<b>Documentation provided by project participant</b>
Revised PoA-DD
<b>DOE assessment</b> <span style="float: right;"><b>Date:</b> 04/03/2020</span>
1. Ok. The PoA-DD has been updated accordingly and related reference is now complete and correct.
2. Ok. GWP is stated now as default value.
3. Ok. Related information is consistent within the PoA-DD
4. Not Ok. $SPEC_{\text{flare}}$ is now included as an ex-ante fixed parameter. However clarify why it is also given as a monitoring parameter.
<b>Project participant response</b> <span style="float: right;"><b>Date:</b> 14/04/2020</span>
4. deleted
<b>Documentation provided by project participant</b>
Revised PoA-DD
<b>DOE assessment</b> <span style="float: right;"><b>Date:</b> 17/04/2020</span>
4. Ok. Related parameter has been deleted from monitoring section.
5. Not ok. However, please clarify whether the grid emission factors esp combined margin has been determined in line with related grid tool §86 (b).
<b>Project participant response</b> <span style="float: right;"><b>Date:</b> 17/04/2020</span>
5. Has been re-checked and grid CM for Mindanao has been revised due to different weighing factors for 2 <sup>nd</sup> crediting period.
<b>Documentation provided by project participant</b>
Revised PoA-DD v18 forwarded 22/04/2020
<b>DOE assessment</b> <span style="float: right;"><b>Date:</b> 23/04/2020</span>
5. Ok. The grid emission factor is correctly determined by applying weighing factors 0.25 for OM and 0.75 for BM as per latest related tool §86 (b): For Luzon-Visayas Grid: $0.25 \times 0.7122 + 0.75 \times 0.5979 = 0.6265 \text{ tCO}_2\text{e/MWh}$ . For Mindanao Grid: $0.25 \times 0.7797 + 0.75 \times 0.8045 = 0.7983 \text{ tCO}_2\text{e/MWh}$ . The applied values are therefore correct and determined in line with methodology and related tools. As all issues have been resolved this finding is closed.

<b>CAR ID</b>	<b>06</b>	<b>Section no.</b>	<b>I.6.3</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				
The table for population projections states for Market swine "Average population" whereas two tables below it is referred to parameter $N_{\text{market,sold,y}}$ . What is the difference and how is parameter $N_{\text{market,sold,y}}$ defined. Please clarify and justify whether the value used to determine $N_{\text{LT,y}}$ is the number of market swine sold in a calendar year or the average population in the farm. Similar for parameter $VS_{\text{market,sold,y}}$ . How is this parameter determined.				
<b>Project participant response</b>				<b>Date:</b> 19/02/2020
The table was revised to reflect $N_{\text{market,y}}$ since the parameter $N_{\text{LT,y}}$ pertains to average population alive in the farm in a year taken from actual census data and not the market swine sold. Likewise, $VS_{\text{market,sold,y}}$ is corrected to reflect $VS_{\text{market,y}}$ calculated from equation 3 of AMS III.D version 21. (p. 35 of the Revised PoA-DD).				
<b>Documentation provided by project participant</b>				

Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 04/03/2020
<p>Ok. As the actual pig census data is applied the average annual population is directly determined from the census. As per onsite inspection to 24 CPAs during the inclusion of 31 CPAs under this PoA the VT can confirm that it standard procedure in pig farms in the host country to monitor the number of animals/pigs of different types and ages every week. Further, two types are in a farm breeding pigs - sow and market pigs – pigs raised to be sold which are market / finisher / nursery / suckling depending on age.</p> <p>However, pls clarify why section for monitoring parameter provides the two parameters <math>N_{p,y}</math> "Number of animal produced annually of type "LT" for the year y" and <math>N_{da,y}</math> "Number of days animal is alive in the farm in the year "y"", input parameters for equation (4) as per AMS-III.D ver 21. Further, why is ER calculation section lacking equation (4). Pls clarify.</p>	
<b>Project participant response</b>	<b>Date:</b> 06/03/2020
<p>The monitoring parameters <math>N_{p,y}</math> "Number of animal produced annually of type "LT" for the year y" has been removed from section for monitoring parameters, and instead <math>N_{LT,y}</math> which is monitored included as a monitored parameter. "Number of days animal is alive in the farm in the year "y"" is still monitored from farm records. ER calculation do not use equation 4 since as the DOE noted above, the actual pig census data are applied and the average annual population is directly determined from the census. Equation 4 of the methodology in p.23 of the tracked PoA-DD has also been deleted for clarity.</p>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 01/04/2020
<p>The methodology requires the determination of the annual average number of animals <math>N_{LT,y}</math> and the use of equation (4). This parameter is calculated using parameters "Number of days animal is alive in the farm" and "number of animals produced annually of type LT for the year y". Please clarify which approach is taken to determine the parameter. As per response the PoA-DD deviates from the applied methodology and a related assessment report for this methodology deviation has to be prepared and submitted along with this RCP report in line with PoA-VVS §387 DOE.</p>	
<b>Project participant response</b>	<b>Date:</b> 01/04/2020
<p>Upon review of the assessment of the DOE and the determination of <math>N_{LT,y}</math>, the PoA-DD has been revised to include equation (4) of AMS-IIID version 21 to calculate <math>N_{LT,y}</math> using monitored data parameters <math>N_{p,y}</math> "Number of animal produced annually of type "LT" for the year y and <math>N_{da,y}</math> "Number of days animal is alive in the farm in the year "y". (See page 23 of 60 of tracked latest version) The PoA-DD now fully complies with the methodology.</p> <p>We also added <math>N_{p,y}</math> in among table of parameters to be monitored in Section I.7. (See page 41 of 60 of tracked latest version.) In addition equation to calculate <math>N_{p,y}</math> is now provided in sections I.6.1 and I.6.3 of the PoA-DD.</p>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD (latest version 1.4)	
<b>DOE assessment</b>	<b>Date:</b> 03/04/2020
<p>Ok. Related equation and parameters are included in PoA-DD in line with related methodology. Finding is closed.</p>	
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

<b>CAR ID</b>	<b>07</b>	<b>Section no.</b>	<b>I.7.1</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				

Under measurement method as described for parameter  $W_{site}$  it is stated that "Simple random sampling approach will be preferred." Besides, under section I.7.1 it is stated that the target population is "categories of pigs: breeding / market / sow / boar / finisher / nursery / suckling etc. " and also that simple random sampling is applied. Please clarify how this is in line with the monitoring methodology : Procedure to measure  $W_{site}$  esp Point 2 and 3

2. Target population: The target population is the 30,000 cattle in the farm, classified into 5 age categories, i.e. dry cow, milk cow, young cow, growing cow and calf.

3. Sampling method: **Stratified random sampling will be carried out.** The cattle population will be classified into 5 age categories as above.

4. Sample size: Approximate equation from the section 2.1.8 of Appendix 1 of "Guideline: Sampling and surveys for CDM project activities and programmes of activities" version 03.0 is used. A coefficient of variation (V) of 1 is used. The sample size is calculated as 271. After applying a response rate of 90% and 10% contingency, the sample size is rounded up to 333. (Please see Appendix 1 of "Guideline: Sampling and surveys for CDM project activities and programmes of activities" version 03.0 for the example of the calculation of sampling size. Or alternatively use the sample size calculator available at <<https://cdm.unfccc.int/Reference/Guidclarif/index.html>>.

Please clarify in course of the above as provided by AMS-III.D v 21 simple random sampling is still a valid option for the monitoring of the parameter  $W_{site}$ .

Finally, as per AMS-III.D box 2 please clarify why the following is not considered in the updated CPA-DD for monitoring  $W_{site}$ :

#### Data

1. Field Measurements: For each sampled cow, the weight will be monthly monitored with the scale installed at the farm by project owner.

2. Quality Assurance/Quality Control: Every technician to monitor the sampled cow will fill in the date and signature; the monitor forms will be collected, summarized and kept by the project participant. In addition, the scale will be calibrated annually.

3. Data analysis: The primary monitoring data are collected and used to calculate GHG emission reductions.

#### Implementation plan

The project participant will establish the detailed measurement plan and train the employees in the farm to collect the data, and the data shall be summarized and analyzed by the CDM manager.

<b>Project participant response</b>	<b>Date:</b> 19/02/2020
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As per non-binding practice example given in latest methodology, the sampling method for  $w_{site}$  has been revised to Stratified random sampling. The PoA-DD was revised to consider data field measurement, QA/QC for  $w_{site}$  as suggested. (p.43 of revised PoA-DD)

#### Documentation provided by project participant

Revised PoA-DD

<b>DOE assessment</b>	<b>Date:</b> 04/03/2020
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OK. The PoA-DD has been updated. Stratified random sampling is now applied. However, usually all sold swine are weighed. Besides, monitoring section under parameter  $W_{site}$  now is consistent in related QA/QC method. Under other elements of monitoring it is now mentioned that an operation plan is developed that defines a standard against which the project performance will be measured in terms of its emission reductions (ER) and conformance with all standards and criteria under the PoA. Therefore, the requirement by the methodology is now integrated in the monitoring plan of the PoA-DD.  
Finding is closed.

#### Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)  
☒ The finding is closed

<b>CAR ID</b>	<b>08</b>	<b>Section no.</b>	<b>I.7.1</b>	<b>Date:</b> 24/01/2020
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**Description of CAR**

Following issues w.r.t Section I.7.1 of the PoA-DD have been identified:	
<ol style="list-style-type: none"> <li>1. Parameter <math>BG_{burnt,y}</math>: As per PoA-DD section I.6.2 default value of 60% for methane content in biogas is applied. Please clarify and specify whether in accordance with AMS-III.D v 21 "Box 3 Non-binding best practice example 4: Application of the default value of methane content in biogas" the related amount of biogas flow is also monitored on a dry basis as, as per methodology the biogas flow and methane content have to be monitored on the same basis.</li> <li>2. Parameter <math>MS\%_{i,y}</math>: The parameter description is inconsistent between PoA-DD and methodology AMS-III.D v21. This parameter is not concerning the monitoring of any baseline data but project data. Further, please clarify how the measurement procedure and monitoring frequency as given in PoA-DD are in line with the requirements by the methodology AMS-III.D v21.</li> <li>3. Parameter <math>nd_{y,i}</math>: The parameter description is not consistent between PoA-DD and methodology AMS-III.D v21. The measurement procedure and monitoring frequency as given in PoA-DD are not in line with the requirements by the methodology AMS-III.D v21.</li> <li>4. Please clarify why the flare efficiency is given under monitoring parameter as the flare efficiency is no monitoring parameter as per related monitoring section in TOOL06 but other parameters are used to determine this value. Pls further clarify why the determination method is not presented in section I.6.1. and finally why given in two section I.6.2 and I.7.1.</li> <li>5. Parameter <math>T_{flare}</math>: The parameter as per latest related TOOL06 is defined as <math>T_{EG,m}</math> and the description in the PoA-DD is inconsistent to the description in the TOOL06. Related descriptions under measurement procedure, QA/QC and any comment are not considered in the CPA-DD. Pls clarify.</li> <li>6. Other flare operation parameters: Please clarify whether this parameter is the related parameter as given in the related TOOL06 <math>Flame_m</math>. If so clarify how the description given in the PoA-DD is in line with the requirements given in the related TOOL06.</li> <li>7. Please clarify how <math>FCH_{4,RG,m}</math> is monitored.</li> <li>8. Please clarify why parameter RVS is provided as section I.6.1 does not state that this is required e.g. based on AMS-III.D v21 §18 (e).</li> </ol>	
<b>Project participant response</b>	<b>Date:</b> 19/02/2020
<ol style="list-style-type: none"> <li>1. Parameter <math>BG_{burnt,y}</math>: As per PoA-DD section I.6.2 default value of 60% for methane content in biogas is applied and in accordance with AMS-III.D v 21 "Box 3 Non-binding best practice example 4: Application of the default value of methane content in biogas" the related amount of biogas flow is also monitored/reported on a dry basis since, as per methodology the biogas flow and methane content have to be monitored on the same basis. (revised PoA-DD p. 38)</li> <li>2. Parameter <math>MS\%_{i,y}</math>: The parameter description is revised and now consistent between PoA-DD and methodology AMS-III.D v21. This parameter is from monitored data, ex post and not from baseline data. Further, the measurement procedure and monitoring frequency as given in PoA-DD are now in line with the requirements by the methodology AMS-III.D v21. (revised PoA-DD p. 42)</li> <li>3. Parameter <math>nd_{y,i}</math>: The parameter description is now consistent between PoA-DD and methodology AMS-III.D v21. The measurement procedure and monitoring frequency as given in PoA-DD are now in line with the requirements by the methodology AMS-III.D v21. (revised PoA-DD p. 42)</li> <li>4. Parameter FE or flare efficiency is given under data parameter 9 in section 5.1 of AMS III.D version 21. The determination method is now described in section I.6.1. and consistent with the description in sections I.6.2 and I.7.1.</li> <li>5. Parameter <math>T_{flare}</math>: The parameter was revised as per latest related TOOL06 and is now <math>TEG_m</math>. The description in the PoA-DD is now consistent to the description in the TOOL06. Related descriptions under measurement procedure, QA/QC and any comment are also considered in the CPA-DD. (revised PoA-DD p. 40)</li> <li>6. Other flare operation parameters: This parameter is now specified as <math>Flame_m</math> in TOOL06. The description given in the PoA-DD is in line with the requirements given in the related TOOL06. (revised PoA-DD p. 41)</li> <li>7. <math>FCH_{4,RG,m}</math>, the mass of methane in kilograms fed to the flare in minute m is determined from <math>FCH_{4,m}</math>, which is measured as the mass flow of methane in the residual gaseous stream during minute m. <math>FCH_{4,m}</math> shall be determined on a dry basis. Equation 3 as described in Section 6.1 of Tool06 shall be used to determine <math>FCH_{4,m}</math> from volumetric flow (measured) of the exhaust gas of the flare on a dry basis at reference conditions in minute m (<math>m^3</math>) sent to flare.</li> <li>8. Parameter RVS based on paragraph 18e is only applicable for CPAs with sequential treatment and will be defined only when applicable to a CPA. For clarity, the PoA-DD was revised to reflect exact wording from the methodology in section I.6.1 (p.25 of revised PoA-DD). The same was also stated in the PoA-DD earlier submitted.</li> </ol>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 04/03/2020

1. OK. PoA-DD has now specified that if methane default value is applied the flow is to be measured on dry basis.
2. OK. The description is now consistent with related methodology. Further the measurement method is consistent with the methodology and the purpose of data has been specified accordingly as the parameter is used to calculate the baseline emission ex-post.
3. Ok. The parameter description is now consistent between PoA-DD and methodology AMS-III.D v21. The measurement procedure and monitoring frequency as given in PoA-DD are now in line with the requirements by the methodology AMS-III.D v21.
4. Ok. The parameter abbreviations have been unified and the descriptions and methods are now consistent with AMS-III.D and within PoA-DD.
5. Ok. The parameter as per latest related TOOL06 is defined as  $T_{EG,m}$  and the description in the PoA-DD is now consistent to the description in the TOOL06. Related descriptions under measurement procedure, QA/QC and any comment are now considered in the CPA-DD.
6. Ok. Other flare parameters is changed to  $Flame_m$  as per related tool. Further the description and methods are now consistent to the tool.
7. Not ok. The approach is understood and correct however the monitoring section I.7.2 does not provide a parameter  $F_{CH_4,RG,m}$ . Pls specify.
8. Ok. Parameter RVS has been provided for completeness in case a related project with sequential treatment would be considered under the PoA.

<b>Project participant response</b>	<b>Date:</b> 06/03/2020
7. The monitoring section I.7.1 (not I.7.2) now provides a parameter $F_{CH_4,RG,m}$ .	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 01/04/2020
7. Not ok. A related parameter has been provided now under section I.7.1 of the updated PoA-DD however the following has been identified: a) The included table is not in line with the table as per template e.g. "Data / Parameter" and "Data unit:" are missing and the parameter abbreviation is given under "Description". Pls revise accordingly. b) It is stated under Source of data and measurement method that the mass flow is monitored by flow meters and that equation (3) of TOOL06 is applied for related determination. Pls clarify why equation (3) of the TOOL06 is not provided in sections I.6.1 and I.6.3 of the PoA-DD and related input parameters given as per TOOL06 are include as monitoring parameter in I.7.1.	
<b>Project participant response</b>	<b>Date:</b> 02/04/2020
7. a) The related parameter $F_{CH_4,RG,m}$ is not directly monitored but calculated from the flow rate of gas that is flared which is already in the monitored parameter under BG burnt (flared) measured by flow meters and $w_{CH_4}$ (default value used) and density of methane. The parameter in question has been removed as a monitored parameter; and its corresponding table (page 42 of 60 of tracked version 1.3) has been deleted, in response to this finding. b) There was a general statement in page 25 of section 1.6.1 stating "If the CPA is using flares to combust the biogas stream, project activity emissions from this activity will be estimated using the 'Tool to determine project emissions from flaring gases containing methane' which is now revised to the latest title of Tool 06. (See Page 25 of 60 in tracked latest version) Also, we would like to correct that the equation used to calculate this is not equation (3) of TOOL(06) but equation (5) of Tool to determine the mass flow of a greenhouse gas in a gaseous stream as referred to in TOOL (06). In addition equation to calculate $F_{CH_4,RG,m}$ is now provided in sections I.6.1 and I.6.3 of the PoA-DD.	
<b>Documentation provided by project participant</b>	
Revised PoA-DD (latest version 18) forwarded 02/04/2020	
<b>DOE assessment</b>	<b>Date:</b> 03/04/2020

<p>7. a) and b) The PoA-DD has been updated accordingly and provides now the correct equation for determining the mass flow rate of methane in the residual gas. This is determined in line with related TOOL08 equation (5). Related equation is given in sections I.6.1 and I.6.3 of the updated PoA-DD. Besides, the related input parameter are now volumetric flow rate of the residual gas, volumetric fraction of methane and the density of methane. As per TOOL06 §39 Table 01 the density of methane is 0.716 kg/m<sup>3</sup> and therefore the application of this default value is considered correct and reasonable as well as conservative. Further, fraction of methane in residual gas is considered equal to parameter <math>w_{CH_4}</math> which is considered reasonable and conservative. This has been already approved during PRC on permanent changes to the monitoring plan for CPA1-2 and 10 w.r.t. alternative option of monitoring of parameter <math>MD_y</math>. The <math>MD_y</math> determination is laid down in AMS-III.D v21 §28 and this methodology allows to use a default value of 60%. Therefore, the application of <math>w_{CH_4}</math> for parameter volumetric fraction of methane to determine the mass flow rate of methane is accepted. Accordingly, the parameter volumetric flow rate of the residual gas is remaining as a monitoring parameter.</p> <p>However, this parameter <math>FV_{RG,m}</math> is missing in section I.7.3 of the PoA-DD. Monitoring section only provides parameter <math>BG_{burnt}</math> (total amount of biogas destroyed) and as the parameter <math>FV_{RG,m}</math> is missing it also unclear how it is determined which amount of gas is burned in an engine which in the flare. Besides, it has been identified that in section I.7.3 in the parameter description for <math>w_{CH_4}</math> and in section I.6.2 it is referred to "(mass fraction)" whereas AMS-III.D §28 states "(volume fraction)". Related correction is requested.</p>	
<b>Project participant response</b>	<b>Date:</b> 03/04/2020
<p>The parameter description for <math>w_{CH_4}</math> and in section I.6.2 and section I.7.3 referred to as "(mass fraction)" has been revised in the PoA-DD to reflect "(volume fraction)" as per AMS-III.D §28. (See pages 32 of 61; 50 of 61 in tracked latest version.)</p> <p>The monitoring section now provides an excerpt from AMS-III.D § 33: "Project activities where a portion of the biogas is destroyed through flaring and the other portion is used for energy may consider applying the flare efficiency to the portion of the biogas used for energy, if separate measurements of the respective flows are not performed. When the amount of methane that is combusted for energy and that is flared is separately monitored, or when only the biogas flow to the flare is monitored and the biogas used for energy is calculated based on electricity generation, a destruction efficiency of 100% can be used for the amount that is combusted for energy ". This defines in the monitoring section how <math>BG_{burnt,y}</math> may be used to determine <math>FV_{RG,m}</math> in the case that it cannot be determined which amount of gas is burned in an engine and which amount is flared. This is also noting that in AMS-III.D §28, the <math>BG_{burnt,y}</math> is defined as Biogas flared or combusted in year y (m<sup>3</sup>), and as such was in the earlier response considered as <math>FV_{RG,m}</math> when the biogas is flared and in other cases § 33 was already under "Additional comments" in the table for parameter <math>BG_{burnt,y}</math> in section I.7.1.</p>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD (latest version 18) forwarded 03/04/2020	
<b>DOE assessment</b>	<b>Date:</b> 06/04/2020
<p><math>w_{CH_4}</math>: Related parameter description has been updated accordingly and is now in line with related methodology and tools.</p> <p><math>FV_{RG,m}</math>: PP specified that <math>BG_{burnt,y} = FV_{RG,m}</math> in case no separate monitoring of biogas flows are conducted. However, PoA-DD does not specify how <math>FV_{RG,m}</math> is monitored in case flows are measured separately. Related parameter is missing in monitoring section I.7.1.</p>	
<b>Project participant response</b>	<b>Date:</b> 06/04/2020
<p><math>FV_{RG,m}</math> details as a monitored parameter is added in Section I.7.1 (see pages 39-40 in tracked latest version.)</p>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD (v18) forwarded 06/04/2020	
<b>DOE assessment</b>	<b>Date:</b> 06/04/2020
<p>Ok. Related parameter now provided.</p> <p>Finding is closed.</p>	
<b>Conclusion</b> Tick the appropriate checkbox	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

<b>CAR ID</b>	<b>09</b>	<b>Section no.</b>	<b>K</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				
<p>Following issues w.r.t. eligibility criteria have been identified:</p> <ol style="list-style-type: none"> <li>1. The description of several criteria are not fully consistent with the related applicability criteria as described in the related methodology. E.g. 11 and 14.</li> <li>2. Criterion 1 only states "As per PoA Guidelines". Please clarify and complete the description.</li> </ol>				
<b>Project participant response</b>				<b>Date:</b> 19/02/2020

Following issues w.r.t. eligibility criteria have been addressed:	
1. The description of several criteria are now fully consistent with the related applicability criteria as described in the related methodology. E.g. 11 (p. 49 of revised PoA-DD) and 14(p. 50 of revised PoA-DD). 2. Criterion 1 only states "As per PoA Guidelines". As relayed in earlier email dated January 19, 2020 to TÜV Nord this should read as "As per PoA Guidelines, CPA is not a component of another CDM programme, has not been registered as a project activity of another CDM project, is undergoing validation within another CDM project, nor is a debundled component of a large scale project activity." This is now reflected in the revised PoA-DD (p.47)	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 03/03/2020
1. Ok. Is now fully consistent with methodologies 2. Ok. The statement is now clarified and fully provided. 3. Not ok. However, the list of eligibility criteria is not in line with PoA PS §124 a, b, e ,f , n. Related revision requested.	
<b>Project participant response</b>	<b>Date:</b> 14/04/2020
1. §3 c) of the AMS-III.D – we added No. 4 (see tracking on this page). Also: adjusted numbering of succeeding rows to No. 4.  2. AMS-I.F §3 and 5 – These items already incorporated in Section I.2 (see Page 16). Slight modification of statement immediately Section K (Page 51) to include reference to Section I.2. Also, see No. 8 in page 52 for related mention as eligibility criteria under Section K.  3. PoA standard §124. The eligibility criteria shall cover as a minimum the following: (a) Geographical boundaries of CPAs consistent with the geographical boundary of the PoA – see No. 25 , page 54.  (b) Conditions to avoid double counting of GHG emission reductions or net anthropogenic GHG removals, such as unique identifications of product and end-user locations (e.g. programme logo) – see No. 26, page 54.  (e) Conditions to check the start dates of CPAs through documentary evidence-- see No. 27, page 54.  (f) Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents-- see No. 28, page 54.  (n) If the generic CPA is small-scale or microscale, conditions for the debundling check based on the "Methodological tool: Assessment of debundling for small-scale project activities". However, if the generic CPA consists solely of units that qualify as "microscale CDM units", these conditions are not required-- see No. 29, page 54.	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 03/03/2020
3. Ok. Related list of eligibility criteria is now in line with PoA Standard. However, clarify why no criterion is given for EIA on CPA level as outlined in section E. of the PoA-DD.	
<b>Project participant response</b>	<b>Date:</b> 20/04/2020
3. Related criteria for EIA for each CPA is included now.	
<b>Documentation provided by project participant</b>	
Revised PoA-DD (v18) forwarded 20/04/2020	
<b>DOE assessment</b>	<b>Date:</b> 22/04/2020
3. Ok. Related requirement for EIA on CPA level is now included in eligibility criteria 24. Finding is closed.	
<b>Conclusion</b> Tick the appropriate checkbox	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

<b>CAR ID</b>	<b>10</b>	<b>Section no.</b>	<b>-</b>	<b>Date:</b> 24/01/2020
<b>Description of CAR</b>				
1. PoA-DD in track change mode is missing. 2. Evidence that anaerobic lagoons are not restricted by Philippine law.				
<b>Project participant response</b>				<b>Date:</b> 30/01/2020



<p>1. Earliest PoA-DD in track change mode is provided, however please note that the template versions are different with different sections; contents and formats of tables have also changed. Current PoA-DD tracked with the latest revision is also provided.</p> <p>2. Section 14 of Republic Act 9275 (or RA 9275; also known as the Philippine Clean Water Act of 2004) states that "... the Department shall encourage the adoption of waste minimization and waste treatment technologies when such technologies are deemed cost effective."</p> <p>In addition to this, Rule 12.1 of the corresponding Department of Environment and Natural Resources (DENR) Administrative Order No. 2005-10 (or DAO No. 2005-10; also known as Implementing Rules and Regulations (IRR) of the Philippine Clean Water Act of 2004) states that: "Although the guidelines are developed based upon particular technologies, these rules will not require that dischargers use the technologies on which the standards were based. Individual facilities may meet these requirements using whatever combination of treatment technologies and process changes they choose."</p> <p>Neither RA 9275 nor DAO No. 2005-10 makes any reference to anaerobic lagoons, whether pertaining to restrictions or otherwise.</p> <p>We attach copies of RA 9275 and DAO No. 2005-10, for reference.</p>	
<b>Documentation provided by project participant</b>	
PoA-DD tracked; Latest revised PoA-DD; Republic Act 9275; DAO No. 2005-10	
<b>DOE assessment</b>	<b>Date:</b> 03/03/2020
<p>1. Ok. PoA-DD of latest version in track change is provided now. DOE confirms that data is materially the same as per previous version however transferred to the latest template version.</p> <p>2. OK. DOE has checked related Act and Rule and can confirm that neither of both restricts the use of anaerobic lagoons for manure treatment. However, the applied treatment system has to meet host country requirements. As pig farmers will not discharge to natural waters but the remainings are mainly given to surrounding farmers to fertilize the land the requirements are fulfilled. This is supported by Discharge Permits issued by Env. Management Bureau of Philippine checked by the DOE during inclusion of 28 CPAs.</p>	
Finding is closed.	
<b>Conclusion</b> Tick the appropriate checkbox	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

<b>CAR ID</b>	<b>11</b>	<b>Section no.</b>	<b>I.7.2</b>	<b>Date:</b> 09/04/2020
<b>Description of CAR</b>				
<p>Pls clarify why following is given in section I.7.2 Sampling instead of I.7.3 Other elements of monitoring plan:  <i>Project emissions</i> are estimated using the equations given in section I.6.1 of the PoA.</p> <p>The Physical leakage (<math>PE_{PL,y}</math>) calculation will be based on monitored parameters of <math>MS\%_{i,y}</math>, <math>N_{LT,y}</math>, <math>VS_{LT,y}</math> and RVS.</p> <p>For <math>PE_{power,y}</math> as per the methodology methane used to power auxiliary equipment of the project (<math>EC_{AE}</math>) will be taken into account accordingly, using zero as its emission factor.</p> <p>The emission reductions achieved from renewable electricity generation are the following: <math>GBE_{y,ex-post} = (EG_{y, ex-post} - EG_{baseline}) * EF_{y,ex-ante}</math></p> <p>Where</p> <p><math>GBE_{y, ex-post}</math> Baseline emissions based on monitored values for year "y" (tCO<sub>2</sub>) from renewable electricity generation</p> <p><math>EG_{y,ex-post}</math> Electricity generated based on monitored values and calculated using the formula found in Section I.6.1 for year "y" (MWh/yr)</p> <p><math>EG_{baseline}</math> Baseline electricity supplied to the grid in case of modified or retrofit units based on monitored values and calculated using the formula found in Section I.6.1</p> <p><math>EF_{y,ex-ante}</math> Baseline emissions factor calculated using the formula found in Section I.6.1 (tCO<sub>2</sub>e/MWh) <i>ex-ante</i> values applied throughout the crediting period</p>				
<b>Project participant response</b>				<b>Date:</b> 14/04/2020
Section has been deleted from I.7.2				
<b>Documentation provided by project participant</b>				

Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 17/04/2020
OK. Related description has been deleted from sampling plan section.	
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding 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>				
<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
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification			

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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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