




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

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

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	Accion Fraterna Biogas CDM project for rural communities in Anantapur, Andhra Pradesh UNFCCC Ref No : 3779
<b>Number and duration of the next crediting period</b>	Number of crediting period: 2 Duration of Crediting period: 31/05/2021 to 30/05/2028
<b>Version number of the validation report</b>	3
<b>Completion date of the validation report</b>	06/10/2021
<b>Version number of PDD to which this report applies</b>	12
<b>Project participants</b>	ACCION FRATERNA ECOLOGY CENTRE
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	AMS.I.E. Switch from non-renewable biomass for thermal applications by the user, Version 11
<b>Mandatory sectoral scopes</b>	Sectoral Scope 1: Energy industries (renewable-/non-renewable sources)
<b>Conditional sectoral scopes, if applicable</b>	Sectoral Scope 13: Waste handling and disposal
<b>Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period</b>	29,784tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	4K Earth Science Private. Limited UNFCCC Ref No. CDM-E-0069
<b>Name, position and signature of the approver of the validation report</b>	S. Jagajothi  Director

**SECTION A. Executive summary**

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4K Earth Science Private Limited has been contracted by 'ACCION FRATERNA ECOLOGY CENTRE' to perform a validation of the registered Project 'Accion Fraterna Biogas CDM project for rural communities in Anantapur, Andhra Pradesh' (UNFCCC Ref #3779) in India for renewal of crediting period.

The scope of the validation is defined as an independent and objective review of the revised Project Design Document, project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the CDM validation and verification standard for project activities (Version 02), CDM project cycle procedure for project activities (Version 02) and CDM project standard for project activities (Version 02), Kyoto Protocol requirements and UNFCCC rules.

The report is based on the assessment of the Project design document (PDD) undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions.

The project activity is the installation of 15,000 biogas plants (digesters) of 2 m<sup>3</sup> capacity each for single households in all the mandals of Anantapur District in Andhra Pradesh State, India. The biogas units are fed by cattle dung generated from the households. The biogas stoves replaces the traditional fire wood stoves used for cooking and heating purposes. The project was registered in UNFCCC on 20/01/2012 with 1<sup>st</sup> crediting period 31/05/2014 – 30/05/2021. The project is currently applying renewal for second crediting period ie, 31/05/2021 to 30/05/2028.

The review of the project design document and the subsequent follow-up interviews have provided 4KES with sufficient evidence to determine the project's fulfillment of all the stated criteria. In our opinion, the project meets all applicable UNFCCC requirements for the CDM.

☒ The project will be recommended to the CDM Executive Board with a request for renewal of crediting period.

☐ The project is not recommended for renewal of crediting period

**SECTION B. Validation team, technical reviewer and approver****B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader/ Technical Expert (1.1 & 13.2)	IR	Narendra Kumar	R	Central Office	x		x	x
2	Local Expert	IR	Anand	S R	Central Office			x	x

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Puratchikkanal	Ma Paa	Central office
2	Approver	IR	Jagajothi	S	Central Office

**SECTION C. Means of validation****C.1. Desk/document review**

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The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions.

All the documents used for arriving validation conclusion are listed in Appendix 03 and referenced accordingly in validation report

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

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), A DOE may postpone site visits for onsite inspections required by the “CDM validation and verification standard for project activities (version 02.0) (VVS-PA)”.

If the site visits cannot be postponed, a proper justification should be provided by the DOE why the site visits cannot be postponed, including the demonstration of a significant impact of delaying the site visits on the DOE, or project participants or coordinating/ managing entity (e.g. commitment/ timeline as per the validation or verification contract, CER delivery commitment by project participants) reliance on applicable force majeure provisions in the validation or verification contracts, if needed.

The project is a Gold Standard CDM project and as per the Gold standard requirements, the RCP requests shall be submitted before the end of the previous crediting period. Hence, for this project activity, the DOE has committed to complete the CDM and Gold standard validation before end of crediting period ie, 30<sup>th</sup> May 2021. With the current COVID cases rate in India, the site visit is not expected to happen in near future. Hence the DOE has skipped the on-site visit. Moreover the estimated emission reduction for the project activity is less than 100,000 t CO<sub>2</sub> eq and hence as per the para 31 of CDM validation and Verification standard for PA, v2, the site visit is optional for this project activity. However para 31 & 32 requirements, the DOE may use other standard auditing techniques for validation or verification as referred in sections 7.1.3.1 of the VVS for PA.

Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification. Along with desk review, audit team has conducted remote audit interview (Zoom interview) as follows:

- A complete desk review of the revised PDD, as well as all applicable country legal requirement and supportive evidences have been checked by the verification team.
- Verification team has performed Zoom interview with PP in order to check implementation, validity of current or updated baseline, application of latest methodology, revised monitoring requirements etc.
- Verification team has also performed telephonic interview with end-user to crosscheck the implementation details and other monitoring details.
- Cross checks between information provided by interviewed personnel (i.e. by checking sources) to ensure that no relevant information has been omitted.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in PDD and supporting documents.

Details of interviewees, topics covered and additional information presented in the below section "C.3 Interviews"

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

### C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	-	Waheed	Accion Fraterna	19/05/2021	<ul style="list-style-type: none"> <li>- Roles and responsibilities</li> <li>- End user agreement</li> <li>- Technical details</li> <li>- Revised baseline</li> <li>- Revised monitoring requirement</li> <li>- Stakeholder consultation process</li> </ul>	Narendra Kumar
2	-	Nagesh	Accion Fraterna	19/05/2021		
3	-	Anji	Accion Fraterna	19/05/2021		
4	Padmanabha	Sudha	FCN	19/05/2021	<ul style="list-style-type: none"> <li>- Updated Baseline assessment</li> <li>- Issues in the PDD</li> <li>- Application of latest methodology</li> <li>- Revised ER estimation</li> </ul>	Narendra Kumar
5	-	Jayamma	End user-2277, Marthadu	19/05/2021	<ul style="list-style-type: none"> <li>- Implementation details</li> <li>- Operational status</li> <li>- CER rights</li> <li>- Grievances</li> <li>- SDG benefits</li> </ul>	Narendra Kumar Anand
6	K	Vijaya Kumari	End user-1668, Velpumadugu	19/05/2021		
7	K	Anuradha	End user-2315, Duggumarri	19/05/2021		
8	T	Lakshmidevi	End user-2320, Duggumarri	19/05/2021		
9	B	Pullamma	End user-861, Boyakottala	19/05/2021		
10	G	Nagalakshmi	End user-651, Neelampalli	19/05/2021		
11	D	Srilekha	End user-2398, Venkatapuramu	19/05/2021		
12	M	Suvarna	End user-2528, Kanaganepalli	19/05/2021		
13	M	Hemalatha	End user-2260, Chennampalli	19/05/2021		

### C.4. Sampling approach

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PP has conducted Kitchen test on sample basis in the non-project households to determine the updated baseline fuel wood consumption.

The Kitchen test results have been conducted in 141 non-project households. The Kitchen Tests are conducted for 3 continuous days in each household. Validation team checked the appropriateness of test results using the following steps:

- The Method of Kitchen test followed by PP is checked and found to be in accordance with established international/national procedures.
- The Kitchen test results have been crosschecked with the respective Kitchen test monitoring sheet and found no error

- The method of Kitchen test is simple and the PP's staffs are found to be capable of doing the test.

Hence, the validation team accepts the Kitchen test result.

No sampling approach is followed in the validation.

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

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	1	-
Application and selection of methodologies and standardized baselines	-	1	-
Validity of original baseline or its update	1	1	-
Estimated emission reductions or net anthropogenic removals	-	-	-
Validity of monitoring plan	-	1	-
Crediting period	-	-	-
Project participants	-	-	-
Post-registration changes	-	-	-
Temporary measures	-	-	1
<b>Total</b>	<b>2</b>	<b>4</b>	<b>1</b>

### SECTION D. Validation findings

#### D.1. Compliance with PDD form

<b>Means of validation</b>	Validation team checked the Project Design Document with latest version of 'Project design document form' in the UNFCCC website (ie, version 11.0)/9/ and "Instructions for completing this form" mentioned as attachment to Project design document form (version 11.0)/8/.
<b>Findings</b>	CAR-01 is raised and closed satisfactorily
<b>Conclusion</b>	Validation team confirms that final PDD is completed using the valid version of the applicable PDD form at the time of submission.

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

<b>Means of validation</b>	<p>For the 1<sup>st</sup> crediting period, the project applied the following methodology</p> <ul style="list-style-type: none"> <li>• AMS-I.E. ver. 4 - Switch from non-renewable biomass for thermal applications by the user</li> </ul> <p>During this renewal of the crediting period, the latest version of AMS. I.E is used:</p> <ul style="list-style-type: none"> <li>• AMS-I.E. ver. 11 - Switch from non-renewable biomass for thermal applications by the user</li> </ul> <p>The assessment team has validated the documentation referred to in the revised PDD for renewable of crediting period and verified the documentation content for verifying the justification of the applicability of the methodology AMS I.E Version 11/5/ and confirmed that the documentation referred to in the PDD is correctly quoted and interpreted. The applicability of the methodology AMS I.E, version 11 is assessed as below:</p> <ul style="list-style-type: none"> <li>- The project activity is installation of 2 m<sup>3</sup> biogas units in the households which generates thermal energy for cooking and hence replaces the non-renewable biomass which otherwise would have used for the cooking needs in the households. Hence the project applies the technology that displaces use of non-renewable biomass by renewable energy.</li> <li>- As verified from the National Sample survey Report, Government of India, 1983, in Andhra Pradesh, 92.01% of the households were using firewood or non-renewable biomass for cooking. Based on the published literature, official reports and statistics, PP has justified the non-renewable biomass has been</li> </ul>
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	<p>used in the project region since 31 December 1989.</p> <ul style="list-style-type: none"> <li>- PP has allotted unique ID number for each biogas unit. The unique ID number is written on each bio-digester on the unit to distinguish it as part of this project activity. The same is checked during the site visit. This will avoid double counting of emission reductions. Also each of the end user's name and the location i.e. District, Mandal, village in which it is constructed along with the Unique ID are recorded in the project database which will be provided in the ER sheet. PP has signed end user agreement with all the biogas users through which end user accepts transfers of the emission reductions generated from the project activity to the PP, Accion Fraterna and is not transferable to any other entity. Hence, the double counting of emission reduction between end users, distributors and producers of stoves etc is avoided. The assessment team also checked the end user agreements and found to be valid. The same has been explained in the revised CDM-PDD.</li> </ul>
<b>Findings</b>	CAR-02 is raised and closed satisfactorily
<b>Conclusion</b>	The project fulfils all relevant criteria of the applied methodology "AMS-I.E.: Switch from non-renewable biomass for thermal applications by the user" - Version 11. Hence use of the selected methodology is appropriate for this project activity.

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

<b>Means of validation</b>	<p>Validation team checked the registered PDD (applicable for 1<sup>st</sup> CP) and the revised PDD submitted for the validity of original baseline or its update. Validity of the baseline has been assessed as per the Methodological Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" Version 03.0.1/13/</p> <p><b>Step 1: Assess the validity of the current baseline for the next crediting period</b></p> <p>The CDM Project Standard for PA, version 2 requires assessing the impact of new relevant national and/or sectoral policies and circumstances on the baseline. The validity of the current baseline is assessed in the following sub-steps:</p> <p><b>Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</b></p> <p>The baseline of the project activity is continued use of the fuel wood for cooking in traditional cook stove that were used before the implementation of the biogas system. There are no relevant national and/or sectoral policies and circumstances ever since the project was registered that have an impact on the baseline. No national and sectoral policies that mandate the PP to invest in the project or prevent village households to use traditional cook stove and fuel wood use.</p> <p>Thus, the baseline identified during the validation is still compliance with the relevant mandatory national and/or sectoral policies</p> <p><b>Step 1.2: Assess the impact of circumstances</b></p> <p>The baseline scenario identified during the validation of the project activity was generation of thermal energy for cooking in the households from the fuel wood, of which a large part of it was non-renewable biomass. So, in the absence of the project activity, the project households would have continued using the fuel wood for their cooking. The project is completely a voluntary action by the PP. Hence, without the project, the end-users would have continued to use non-renewable biogas in traditional cook stove for cooking. There is no circumstances that affect rural households prevent from fuel wood use for cooking in the traditional cook stove.</p> <p>Since, there is no change in the circumstance and hence the circumstance will not have any impact on the current baseline emission.</p> <p><b>Step 1.3: Assess whether the continuation of the use of current baseline</b></p>
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**equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested**

In the absence of the project activity, the baseline scenario in the project boundary is the use of non-renewable biomass for cooking and heating water on traditional cook stoves with low efficiencies. The traditional cook stoves are mostly three stone cook stove or mud stove which are made locally by the households itself and does not involve any cost for purchase of new stoves or repair. No investment would be required for continuation of baseline equipments even now. Even in the present scenario, fuel wood is the common fuel used for cooking & water heating in the Anantapur district. In the project area, PP has also conducted a survey in non-project households during September 2020. As per the survey results/18/, all the rural households in the project area predominantly uses fuel wood for cooking & water heating in the traditional wood stove (without chimney or grate). As per National Sample Survey-76<sup>th</sup> Round report/27/<sup>1</sup>, about 44.5% households in India and 18.4% of rural households in Andhra Pradesh still use only fire wood for cooking. Based on a national family health survey for Anantapur District, 2015-16, which is the project region, households using clean fuel for cooking accounts for only 55.9%, thus making 44.1% of households in rural areas still using solid fuels for cooking. Though LPG is promoted by the government through the Deepam Scheme, easy access to firewood without additional costs significantly contributes to continued use of firewood for cooking. This shows that though LPG has been provided with subsidy to the rural communities, the refill is very expensive and rural households are still using traditional stove for cooking<sup>2</sup>.

Hence, during the 2<sup>nd</sup> crediting period also, the baseline traditional cook stoves and use of fuel wood for cooking would have continued in the absence of the project activity

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

As per para 404 of CDM Validation and Verification standard for PA(version 2), validity of the original baseline or its update is assessed as below:

- a) As per the PDD, the following are the baseline parameters that are fixed ex-ante:

$BC_{BL,HH,y}$	=	Quantity of woody biomass that is substituted or displaced in year y (tonnes)
$f_{NEB,y}$	=	Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass (fraction or %)
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted
$EF_{projected\_fossil}$	=	Emission factor of fossil fuels projected to substitute non-renewable woody biomass by similar consumers (tCO <sub>2e</sub> /TJ)..

The assessment of the validity of the parameters are provided below:

Ex-ante Parameters	Value for the 1 <sup>st</sup> Crediting period	Validity for 2 <sup>nd</sup> Crediting period	Assessment
$BC_{BL,HH,y}$	3.57	Not Valid	For the previous crediting period,

<sup>1</sup> [http://www.mospi.gov.in/sites/default/files/publication\\_reports/Report\\_584\\_final\\_0.pdf](http://www.mospi.gov.in/sites/default/files/publication_reports/Report_584_final_0.pdf)

<sup>2</sup> <https://energy.economictimes.indiatimes.com/news/oil-and-gas/indias-ujjwala-scheme-provided-lpg-access-but-failed-to-promote-its-use-study/73580017>

	tonnes/year/family		<p><math>BC_{BL,HH,y}</math> (depicted as <b>By</b> in previous PDD) is estimated based on sample survey conducted at the time of validation.</p> <p>Since, this is an old data, the value may not be applicable for the 2<sup>nd</sup> crediting period.</p>
$f_{NRB,y}$	0.91	Not valid	<p>For the previous crediting period the <math>f_{NRB,y}</math> was calculated based on the report "Forest Survey of India, 2011, Ministry of Environment and Forests, Government of India.</p> <p>Since, the latest data is now available and also the applied methodology requires <math>f_{NRB,y}</math> to be calculated as per the 'Tool 30: Calculation of the fraction of non-renewable biomass'/16/, the old data estimated for the previous crediting period is no more valid.</p>
$NCV_{biomass}$	0.015 TJ/tonne	Valid	<p>As per latest version of applied methodology (AMS I.E, version 11), the NCV of biomass is same. However, the value is provided with four decimal accuracy ie, 0.0156 TJ/tonne</p>
$EF_{projected\_fossil}$	81.6 tCO <sub>2</sub> /TJ	Not Valid	<p>As per the latest version of AMS.I.E methodology, the default emission factor of projected fuel is changed to 64.4 tCO<sub>2</sub>/TJ for the project region (South Asia). Hence, the emission factor of 81.6 tCO<sub>2</sub>/TJ is no more valid.</p>

### Step 2: Update the current baseline and the data and parameters

As determined in step 1.4 above, the following fixed parameters need to be updated:

$BC_{BL,HH,y}$  = Average annual consumption of woody biomass per household before the start of the project activity

$f_{NRB,y}$  = Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass ( $f_{NRB}$ )

$EF_{projected\_fossil}$  = Emission factor for the substitution of non-renewable woody biomass by similar consumers.

$BC_{BL,HH,y}$

To check the updated  $BC_{BL,HH,y}$  value, PP has conducted the Kitchen test in the non-project households in the project area.

Prior to kitchen test, PP has conducted pilot kitchen test in 10 non-project households. Based on the mean (2.01 kg/capita/day) and standard deviation (0.71 kg/capita/day) arrived from the pilot study, the sample size is determined based on the 90/10 confidence/precision level using the below formula:



$$n = \frac{1.645^2 V}{0.1^2}; \text{ where } V = \left( \frac{SD}{\text{mean}} \right)^2$$

The sample size at 90/10 confidence/precision level and @80% response rate for infinite sample population it is calculated to be 42 households.

However, to get the more accurate results, PP has conducted Kitchen test in 141 non-project households. The Kitchen Tests are conducted for 3 continuous days in each sample household. Average fuel wood consumption for each family is determined from Kitchen Test and per capita fuel wood consumption for each household is estimated based on the respective family size. As per the survey result, average per capita fuel wood consumption is 1.93 kg/capita/day and average household size is 4.77.

Also from the survey results, it is found that the precision level achieved in the survey for per capita fuel wood consumption is 4.59% and precision level achieved for family size is 4.01% which are within the required precision level ie, 10%. Hence, the validation team finds the sample size considered for the kitchen test is adequate.

PP determined household average the fuel wood consumption using the per capita fuel wood consumption determined through sample survey and the actual household size of the project households as per the district statistics for Anantapur, 2016<sup>3</sup>, (ie, 4) which more conservative compared the household size determined through sample survey. Hence, the average fuel wood consumption per household per year is estimated to be 2.82 tonnes/year/household. This is found to be much lesser than the fuel wood consumption fixed during the first crediting period. Validation team checked the appropriateness of test results using the following steps:

- The Method of Kitchen test followed by PP is checked and found to be in accordance with established procedures in the host country.
- The Kitchen test results have been crosschecked with the respective Kitchen test monitoring sheet and found no error
- The method of Kitchen test is simple and the PP's staffs are found to be capable of doing the test.

Hence, the validation team accepts the  $BC_{BL,HH,y}$  value determined through Kitchen test.

#### $f_{NRB}$

In the updated PDD, the  $f_{NRB,y}$  is calculated based on the data provided in the FSI report 2019/22/ as per the procedure given in the 'Tool 30: Calculation of the fraction of non-renewable biomass', version 3. The assessment of the same is provided below:

The  $f_{NRB}$  is calculated using the below formula

$$f_{NRB} = \frac{NRB}{NRB + RB}$$

Where

$f_{NRB}$  = Fraction of non-renewable biomass in the country/region or project area  
 NRB = Quantity of non-renewable biomass (t/yr) in the country/region or project area  
 RB = Quantity of renewable biomass in the country/region or project area

<sup>3</sup> Handbook of Statistics, Anantapur District, 2016. Page 12.

<https://cdn.s3waas.gov.in/s333e8075e9970de0cfea955afd4644bb2/uploads/2019/07/2019071836.pdf>

NRB is calculated as below:

$$NRB = H - RB$$

Where

H - Total annual consumption of wood in the absence of the project activity in the country/region/project area (t/year)

H is calculated as below:

$$H = HW \times N + CE + NE$$

Where:

*HW* Average consumption of wood fuel per household, including fuelwood and charcoal, in the applicable area in the relevant period (tonnes//household)

*N* Number of households consuming wood fuel within the applicable area in the relevant period (number)

*CE* Commercial woody biomass consumption for energy applications (e.g. commercial, industrial or institutional uses of woody biomass in ovens, boilers etc.) that are extracted from forests or other land areas in the applicable area in the relevant period (tonnes)

*NE* Commercial woody biomass consumption for non-energy applications (e.g. construction, furniture) that are extracted from forests or other land areas in the applicable area in the relevant period (tonnes)

RB is calculated as below:

$$RB = \sum (MAI_{forest,i} \times (F_{forest,i} - P_{forest})) + \sum (MAI_{other,i} \times (F_{other,i} - P_{other}))$$

*MAI<sub>forest,i</sub>* - Mean Annual Increment of woody biomass growth per hectare in subcategory i of forest areas (t/ha/yr)

*MAI<sub>other,i</sub>* - Mean Annual Increment of woody biomass growth per hectare in subcategory i of other wooded land areas (t/ha/yr)

*F<sub>forest,i</sub>* - Extent of forest in sub-category i (ha)

*F<sub>other,i</sub>* - Extent of other wooded land in sub-category i (ha)

*P<sub>forest</sub>* Extent of non-accessible area (e.g. protected area where extraction of wood is prohibited, geographically remote area) within forest areas (ha)

*P<sub>other</sub>* Extent of non-accessible area (e.g. protected area where extraction of wood is prohibited, geographically remote area) within other wooded land areas (ha)

*i* Sub-category i of forest areas and other wooded land areas

#### Determination of H

Parameter	Value	Assessment
HW	2.82 t/family/year	As per Kitchen performance test/11/ conducted by PP in the project region, the per capita fuel wood consumption is 2.82 t/family/ yr. Refer section D.3 for detailed assessment. Hence the value considered by PP is appropriate.
N	9,222,686	Number of households consuming wood fuel for thermal applications within the

			<p>selected region (ie, Andhra Pradesh + Telangana) is calculated based on the number of population in this region, the average family size and percentage of households using fuel wood for cooking.</p> <p><u>Population:</u> 91,355,932 is the total population of Andhra Pradesh &amp; Telangana and is taken as per the Aadhar statistics/31/ as on 2020/2021. This is verified from the <a href="https://www.indiagrowing.com/">https://www.indiagrowing.com/</a>. Out of 91,355,932 population, 60,761,631 is the rural population and remaining 30,594,301 is the urban population which is calculated based on the share of rural &amp; urban population as per Census 2011 data. The data &amp; calculation is verified and found to be correct.</p> <p><u>Family size:</u> As the fuel wood consumption (<math>HW_{region}</math>) was estimated based on the family size of 4, the same is taken here. This is found to be appropriate and in line the official statistics of Andhra Pradesh <sup>4</sup> and Telangana<sup>5</sup>.</p> <p><u>Percentage of HH using fuel wood for cooking:</u> As per National Family Health Survey (NFHS)/35/, average of 82.55% family from Andhra Pradesh &amp; Telangana have LPG connections out of which 50% households uses LPG cooking. So effectively 58.37% of rural population still use fuel wood for cooking. From the NFHS survey, it is found that 96.05% of urban population uses LPG for cooking. Hence, effectively 3.95% of urban population still use fuel wood for cooking. The details are verified from National Family Health Survey (NFHS) report and Kumar et al., 2020 report.</p> <p>From the above data, PP calculated the <math>N_{region}</math> as 9,222,686. The calculation is checked and found to be correct.</p>
	CE	0	Data for commercial woody biomass consumption for energy applications is not available. Hence, PP consider the same as 0 as conservative option. This is found to be acceptable as it is conservative.
	NE	18,637,088.22 tonne	As per the FAO 2019 report, the total round wood consumption for India during year 2019 is 352,856,168 cum or 278,756,373 (considering 0.79 tonne/m <sup>3</sup> density). The FAO 2019 report is verified and found that the value provided for the year 2019 is correct. The round wood

<sup>4</sup> <https://des.ap.gov.in/MainPage.do;jsessionid=F04A7521C972392935BCA351244DEF43>

<sup>5</sup> <https://www.telangana.gov.in/about/state-profile>

			consumption for selected region (Andhra Pradesh & Telangana) is apportioned based on the population. The calculation is checked and found to be correct.												
H	44,645,062 tonne	Calculated using the below formula $H=HW \times N + CE + NE$ The calculation is verified and found to be correct													
Determination of RB															
<table><tr><th>Parameter</th><th>Value</th><th colspan="2">Assessment</th></tr><tr><td>MAI<sub>forest</sub></td><td>1.5 t/ha/yr</td><td colspan="2"><p>PP calculated MAI using the three different data explained below:</p><p>1. <u>2019 IPCC guidance and 2019/2011 FSI Report</u>: The average MAI has been calculated from share of forest area for each type of forest and MAI of each type of forest. The Share of forest area has been calculated from the FSI 2011 report. As the share of are of each type of forest is not available in the latest FSI report these details are not available, PP has taken the same from 2011 report. This is verified and found to be correct. The MAI value for each type of forest is taken from IPCC Forestland, 2019 Refinement to the 2006 IPCC Guidelines. The values considered for calculation are cross verified with the IPCC Forestland, 2019 report and found to be correct. The average MAI value calculated to be 1.50 t/ha/yr.</p><p>2. <u>1995 data</u>: Calculated based on the growing stock taken from FSI 1995 report/33/ and Annual increment taken from Asia Pacific Forestry Sector Outlook Study-II Country Report/34/. Based on these data, the MAI is calculated to be 0.994 t/ha/yr</p><p>3. <u>Kaul et al., 2010 report</u>: This is based on the report 'Phytomass carbon pool of trees and forests in India' by Meenakshi Kaul · G. M. J. Mohren · V. K. Dadhwa/23/ (page 9) which is again derived from Singh (2000) and FSI (1995a, b). As per this report the average increment of for the Andhra Pradesh forests is 0.763 t/ha/yr. The value is verified with the report and found to be correct</p><p>PP compared all the three values calculated above and considered MAI value of 1.5 t/ha/yr for the fNRB calculation as this results to lower fNRB value and hence it is most conservative. This is found to be appropriate.</p></td></tr><tr><td>F<sub>forest,i</sub></td><td>6,158,959ha</td><td colspan="2">This is based on Forest Survey of India, 2019 report/22/ (Chapter 11.1, Page 4 for</td></tr></table>				Parameter	Value	Assessment		MAI <sub>forest</sub>	1.5 t/ha/yr	<p>PP calculated MAI using the three different data explained below:</p> <p>1. <u>2019 IPCC guidance and 2019/2011 FSI Report</u>: The average MAI has been calculated from share of forest area for each type of forest and MAI of each type of forest. The Share of forest area has been calculated from the FSI 2011 report. As the share of are of each type of forest is not available in the latest FSI report these details are not available, PP has taken the same from 2011 report. This is verified and found to be correct. The MAI value for each type of forest is taken from IPCC Forestland, 2019 Refinement to the 2006 IPCC Guidelines. The values considered for calculation are cross verified with the IPCC Forestland, 2019 report and found to be correct. The average MAI value calculated to be 1.50 t/ha/yr.</p> <p>2. <u>1995 data</u>: Calculated based on the growing stock taken from FSI 1995 report/33/ and Annual increment taken from Asia Pacific Forestry Sector Outlook Study-II Country Report/34/. Based on these data, the MAI is calculated to be 0.994 t/ha/yr</p> <p>3. <u>Kaul et al., 2010 report</u>: This is based on the report 'Phytomass carbon pool of trees and forests in India' by Meenakshi Kaul · G. M. J. Mohren · V. K. Dadhwa/23/ (page 9) which is again derived from Singh (2000) and FSI (1995a, b). As per this report the average increment of for the Andhra Pradesh forests is 0.763 t/ha/yr. The value is verified with the report and found to be correct</p> <p>PP compared all the three values calculated above and considered MAI value of 1.5 t/ha/yr for the fNRB calculation as this results to lower fNRB value and hence it is most conservative. This is found to be appropriate.</p>		F <sub>forest,i</sub>	6,158,959ha	This is based on Forest Survey of India, 2019 report/22/ (Chapter 11.1, Page 4 for	
Parameter	Value	Assessment													
MAI <sub>forest</sub>	1.5 t/ha/yr	<p>PP calculated MAI using the three different data explained below:</p> <p>1. <u>2019 IPCC guidance and 2019/2011 FSI Report</u>: The average MAI has been calculated from share of forest area for each type of forest and MAI of each type of forest. The Share of forest area has been calculated from the FSI 2011 report. As the share of are of each type of forest is not available in the latest FSI report these details are not available, PP has taken the same from 2011 report. This is verified and found to be correct. The MAI value for each type of forest is taken from IPCC Forestland, 2019 Refinement to the 2006 IPCC Guidelines. The values considered for calculation are cross verified with the IPCC Forestland, 2019 report and found to be correct. The average MAI value calculated to be 1.50 t/ha/yr.</p> <p>2. <u>1995 data</u>: Calculated based on the growing stock taken from FSI 1995 report/33/ and Annual increment taken from Asia Pacific Forestry Sector Outlook Study-II Country Report/34/. Based on these data, the MAI is calculated to be 0.994 t/ha/yr</p> <p>3. <u>Kaul et al., 2010 report</u>: This is based on the report 'Phytomass carbon pool of trees and forests in India' by Meenakshi Kaul · G. M. J. Mohren · V. K. Dadhwa/23/ (page 9) which is again derived from Singh (2000) and FSI (1995a, b). As per this report the average increment of for the Andhra Pradesh forests is 0.763 t/ha/yr. The value is verified with the report and found to be correct</p> <p>PP compared all the three values calculated above and considered MAI value of 1.5 t/ha/yr for the fNRB calculation as this results to lower fNRB value and hence it is most conservative. This is found to be appropriate.</p>													
F <sub>forest,i</sub>	6,158,959ha	This is based on Forest Survey of India, 2019 report/22/ (Chapter 11.1, Page 4 for													

			Andhra Pradesh & Chapter 11.26, Page 3. for Telangana). The total forest area in Andhra Pradesh + Telangana is provided in this report. The value is verified with the report and found to be correct
	$P_{forest,i}$	1,100,800ha	This is based on Forest Survey of India, 2019 report/22/ (Chapter 11.1, Page 3 for Andhra Pradesh & Chapter 11.26, Page 2 for Telangana). The total protected forest area in Andhra Pradesh + Telangana is provided in this report. The value is verified with the report and found to be correct
	$MAI_{other,i}$	3.02 t/ha/yr	<p>This is calculated based on the FSI, 2020 report “Trees outside forest resources in India”, Forest Survey of India, Ministry of Environment, Forest &amp; Climate Change, Government of India. FSI Technical Information Series, Volume 2., No.1, 2020<sup>6</sup>.</p> <p>As per this report (page 19), the annual timber yield from Trees outside forest (TOF) of Andhra Pradesh is 3.14 mn cum/year and for Telangana is 2.12 mn cum/year. Considering the biomass density of 0.79 t/m<sup>3</sup> and total extent of trees outside forest (TOF) area of 13,75,900 (as per FSI,2019), the <math>MAI_{other}</math> is calculated to be 3.02 t/ha/yr.</p> <p>Since the <math>MAI_{others,i}</math> is taken from government data, the value considered by PP is found to be appropriate.</p>
	$F_{other,i}$	13,75,900 ha	This is based on Forest Survey of India, 2019 report/22/ (Chapter 11.1, Page 3 for Andhra Pradesh & Chapter 11.26, Page 2. For Telangana). The total extent of trees outside forest (TOF) area in Andhra Pradesh + Telangana is provided in this report. The value is verified with the report and found to be correct
	$P_{other,i}$	0 ha	In India, there is no protected area on TOF. Hence, PP considered this as zero. This is also found to be conservative and hence acceptable
	RB	11,742,639 t/yr	<p>Calculated as below:</p> $RB = \sum (MAI_{forest,i} \times (F_{forest,i} - P_{forest})) + \sum (MAI_{other,i} \times (F_{other,i} - P_{other}))$ <p>The calculation is checked and found to be correct.</p>
Calculation of NRB			
	Parameter	Value	Assessment
	NRB	32,902,423 t/yr	<p>This is calculated as below: NRB = H-RB The calculation is checked and found</p>

<sup>6</sup> <http://weblines.co.in/fsi-result/technical-information-series-vol2-no1-2020.pdf>

		to be correct.						
<p>Calculation of <math>f_{NRB}</math></p> <table border="1"> <thead> <tr> <th>Parameter</th><th>Value</th><th>Assessment</th></tr> </thead> <tbody> <tr> <td><math>f_{NRB}</math></td><td>0.737</td><td> <p>This is calculated as below:</p> <math display="block">f_{NRB} = \frac{NRB}{NRB + RB}</math> <p>The calculation is checked and found to be correct.</p> </td></tr> </tbody> </table> <p><b><u>EF<sub>projected fossil fuel</sub></u></b></p> <p>The projected fossil fuel is now taken as per the applied methodology (AMS I.E, v11). As per the Table 2 of the methodology, the emission factor of projected fossil fuel for south Asia 64.4 t CO<sub>2</sub>e/TJ and the same is considered in the PDD. Hence Ok.</p> <p>All the above updated parameters takes into consideration the impact of:</p> <ul style="list-style-type: none"> <li>• All the new relevant mandatory national and/or sectoral policies on Renewable Energy Sector; and</li> <li>• Any changes in circumstances or conditions, for example, change in market characteristics, the availability of fuels for power generation or raw materials for developing new power generation capacity as well as the impact of electricity or fuel prices.</li> </ul>			Parameter	Value	Assessment	$f_{NRB}$	0.737	<p>This is calculated as below:</p> $f_{NRB} = \frac{NRB}{NRB + RB}$ <p>The calculation is checked and found to be correct.</p>
Parameter	Value	Assessment						
$f_{NRB}$	0.737	<p>This is calculated as below:</p> $f_{NRB} = \frac{NRB}{NRB + RB}$ <p>The calculation is checked and found to be correct.</p>						
<b>Findings</b>	CL-01 & CAR-04 are raised and closed satisfactorily							
<b>Conclusion</b>	Validity of the baseline has been correctly assessed and the parameters are updated as per the Methodological Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" Version 03.0.1 in the PDD submitted for the renewal of crediting period.							

#### D.4. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	<p>The validation team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for project activity are in accordance with applied methodology.</p> <p>Validation team checked section B.6.1 &amp; B.6.3 of the PDD to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology.</p> <p><b>Baseline Emission:</b> The baseline emission of the project activity is estimated in accordance with applied methodology AMS-I.E (Version 11) as follows:</p> $BE_y = B_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\_fossil\_fuel}$ <table border="1"> <thead> <tr> <th>Parameter</th><th>Assessment</th></tr> </thead> <tbody> <tr> <td><math>B_y</math> - Quantity of woody biomass that is substituted or displaced in tonnes</td><td> <p>The quantity of woody biomass substituted will be estimated based the option (a) given in the methodology as below:</p> <math display="block">B_y = N_{HH} \times (BC_{BL,HH,y} - BC_{PJ,HH,y})</math> <p>The parameter <math>N_{HH}</math> (Number of households in the project activity in year y) is fixed ex-ante. The number of households where the biodigesters proposed are 15,000 and hence the same value is considered for ex-ante calculation</p> </td></tr> </tbody> </table>	Parameter	Assessment	$B_y$ - Quantity of woody biomass that is substituted or displaced in tonnes	<p>The quantity of woody biomass substituted will be estimated based the option (a) given in the methodology as below:</p> $B_y = N_{HH} \times (BC_{BL,HH,y} - BC_{PJ,HH,y})$ <p>The parameter <math>N_{HH}</math> (Number of households in the project activity in year y) is fixed ex-ante. The number of households where the biodigesters proposed are 15,000 and hence the same value is considered for ex-ante calculation</p>
Parameter	Assessment				
$B_y$ - Quantity of woody biomass that is substituted or displaced in tonnes	<p>The quantity of woody biomass substituted will be estimated based the option (a) given in the methodology as below:</p> $B_y = N_{HH} \times (BC_{BL,HH,y} - BC_{PJ,HH,y})$ <p>The parameter <math>N_{HH}</math> (Number of households in the project activity in year y) is fixed ex-ante. The number of households where the biodigesters proposed are 15,000 and hence the same value is considered for ex-ante calculation</p>				

	<p>The parameter <math>BC_{BL,HH,y}</math>(Average annual consumption of woody biomass per household before the start of the project activity, tonnes/household/year) is fixed ex-ante. , PP has conducted the Kitchen test in the non-project households in the project area. Please refer the assessment in section D.3 above. Hence, the value considered for this parameter (ie,2.82 tonnes/hh/yr) is correct.</p> <p>The parameter <math>BC_{PJ,HH,y}</math> (If it is found that pre-project devices were not completely displaced but continue to be used to some extent, average annual consumption of woody biomass per household in the pre-project devices during the project activity tonnes/household/year) is monitored ex-post. For the ex-ante estimation it is assumed as zero as it is assumed that the project will completely replace the NRB in the baseline stove. This is found to be acceptable.</p> <p>Hence, the <math>B_y</math> is estimated ex-ante as 42343.85 t/year is verified to be correct.</p>
$f_{NRB,y}$ - Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass	The value is fixed ex-ante. It is calculated from the FSI 2019- State of Forest Report/22/, Forest Survey of India, Ministry of Environment and Forests, Government of India, Please refer the assessment in the above section D.3. The calculated $f_{NRB}$ value of 0.737 is verified to be correct.
$NCV_{biomass}$ - Net calorific value of the non-renewable woody biomass that is substituted	This is fixed ex-ante. PP considered IPCC default value of 0.0156 TJ/ton as given in methodology/6/ and hence acceptable
$EF_{projected\_fossil\ fuel}$ - Emission factor for the substitution of non-renewable woody biomass by similar consumers.	This is fixed ex-ante. The projected fossil fuel is taken as per the applied methodology (AMS I.E, v11). As per the Table 2 of the methodology, the emission factor of projected fossil fuel for south Asia 64.4 t CO <sub>2</sub> e/TJ and the same is considered for the emission reduction calculation. Hence Ok.

Based on the above values, the baseline emission is estimated as 31,352 tCO<sub>2</sub>/year for the ex-ante calculation.

**Project emission:**

The project does not involve any cultivation of biomass. Hence, the project emission ( $PE_y$ ) considered zero. Hence  $PE_y = 0$  tCO<sub>2</sub>e

**Leakage:**

As per Tool 16: Project and leakage emissions from biomass v4, there are two leakage emission applicable:

$LE_y = LE_{BC,y} + LE_{BR,y}$

<b>Parameter</b>	<b>Assessment</b>
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	LE <sub>BC,y</sub> - Leakage emissions due to shift of pre-project activities resulting from cultivation of biomass in a dedicated plantation, in year y	Not applicable as the project does not involve any cultivation of biomass
	LE <sub>BR,y</sub> - Leakage emissions due to diversion of biomass residues from other applications, in year y	<p>As per 39 of the applied methodology, Leakage emissions related to the non-renewable woody biomass saved by the project activity shall be assessed based on ex post surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples). Alternatively, B<sub>y</sub> is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.</p> <p>PP decided to use leakage adjustment factor. Hence, the leakage is 5% of the baseline emission which is estimated to be 1,568tCO<sub>2</sub>/year. The same is verified to be correct.</p>
<p>Hence, the total leakage emission calculated to be 1,568tCO<sub>2</sub>/year.</p> <p><b>Emission reduction:</b></p> <p>As per the methodology emission reduction (ER<sub>y</sub>) is calculated as below:</p> $ER_y = BE_y - PE_y - LE_y$ $= 31,352 - 0 - 1,568 = 29,784 \text{ tCO}_2\text{e/year}$ <p>PP has submitted the ex-ante emission reduction estimation in a excel sheet/2/. The excel sheet is clear, viewable, non-protected and the calculated values in the sheet are reproducible. Hence the ex-ante emission reduction calculated for this project is correct.</p>		
<b>Findings</b>	No finding	
<b>Conclusion</b>	<p>Validation team confirm that the algorithms and formulae proposed to calculate project emissions, baseline emissions, leakage and emission reductions in the PDD is in line with the requirements of the selected methodology AMS I.E, version 11.</p> <p>For ex-ante calculation, the assessment team confirms that</p> <ul style="list-style-type: none"> <li>• All assumptions and data used by the project participants are listed in the PDD, including their references and sources;</li> <li>• All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;</li> <li>• All values used in the PDD are considered reasonable in the context of the project.</li> <li>• The applied formula and methods for calculating ER are in accordance with the applied methodology and</li> <li>• All calculations are complete and without any omissions.</li> </ul>	

#### D.5. Validity of monitoring plan

<b>Means of validation</b>	<p>Validation team checked whether existing monitoring plan followed during the 1<sup>st</sup> crediting period monitoring the plan is still valid for the 2<sup>nd</sup> crediting period or not. Validation team checked the monitoring plan provided in the revised DD and crosschecked with the monitoring plan provided in the PDD of 2<sup>nd</sup> crediting period.</p> <p>Validation team also checked whether the monitoring plan provided in the revised PDD is in consistent with requirements of the applied methodology (AMS I.E, version 11).</p>
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The information provided in the PDD has been found in compliance with the information evaluated during the site visit, while interviewing with the concerned people and the same was re-affirmed through the documentary evidence.

The monitoring plan described in the PDD is in compliance with the applied methodology. The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that monitoring parameters are applied in line with the requirement of the methodology and relevant in the context of the project. The procedures have been reviewed by the assessment team through document review and interviews with the respective department's personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PP. Specifically, these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the PP will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are fixed ex-ante are:

Parameter	Value	Source & Assessment
<b>Rating Biogas</b> - Thermal capacity of a digester	1.78	The thermal capacity digester is based on the technical specification of the biogas stove. The calculation is verified and found to be correct.
$BC_{BL,HH,y}$ - Average annual consumption of woody biomass per household before the start of the project activity	2.82	It is calculated determined through the following:  1. Kitchen Test conducted in the project area/17/  Please refer assessment Section D.3 above.
$f_{NRB,y}$ - Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass	0.737	Please refer assessment Section D.3 above.
$NCV_{biomass}$ - Net calorific value of the non-renewable woody biomass	0.0156	This is IPCC default value as per AMS I.E Methodology/5/. Hence OK.
$EF_{projected\_fossil\ fuel}$ - Emission factor for the substitution of non-renewable woody biomass by similar consumers.	64.4	This is default value as per AMS I.E methodology/5/ for the South Asia. Hence appropriate.
Determination of Leakage	0.14 for household fuelwood use of 2.82 t/HH/Yr. Determined by net to gross adjustment factor of 0.95 to account for leakage	This is estimated based on the default value as per AMS I.E. Methodology/5/ for leakage. Hence appropriate.

The parameters that are to be monitored ex-post are:

Parameter	Monitoring Details
<b>Date of commissioning of biogas units</b> - Actual date of commissioning of the project device.	The construction processes were monitored on a day to day basis and database maintained from its initiation to completion dates for each of the biogas unit in first crediting period of the project activity. Thus the start date of each of the unit installed in fixed for each of the unit.
<b>N<sub>HH</sub></b> - Number of households in the project activity in year y	The construction processes were monitored on a day to day basis and database maintained from its initiation to completion dates for each of the biogas unit. Thus the start date of each of the unit installed in fixed for each of the unit. In case of replacement of any unit due to demolition will be recorded and the loss days accounted for. This could be for the same user or new users, in which case the baseline is the users were using fuel wood. A new end user agreement will be signed with them and recorded.
<b>Number of biogas plants operating</b> - Number of plants operating in year	In every village, the women Volunteer monitors the biogas units that are non-operational. The days other than that non-operational will determine the biogas units which are operational. For the monitoring period, the operational days of installed biogas units will be calculated by subtracting the non-usage days. The emission reduction will be estimated only for operational days
<b>BC<sub>FJ,HH,y</sub></b> - Average annual consumption of woody biomass per household in the pre-project devices during the project activity, if it is found that pre-project devices were not completely displaced but continue to be used to some extent	1. As and when biogas units are not functional, the beneficiaries report to the village level women volunteer, who in turn reports to the Case Worker of the project for the repair of the unit. A log book is maintained for the reason of non-function and days under repair. The data is entered into the monitoring solution for each of the unit. The appropriate fuelwood use for non-operational days of biogas units will be accounted. 2. For parallel use of pre-project devices, monitoring shall consist of estimation of a representative sample thereof, at least once every two years (biennial) at 95/10 confidence/precision. A statistically determined sample size will be sampled to determine the quantity of fuelwood used on pre project devices. A household level questionnaire survey will be conducted.
<b>Confirmation that non-renewable biomass has been substituted</b>	A household level sample survey will be conducted biennially at 95/10 confidence/precision level to confirm that non-renewable biomass has been substituted.

The monitoring plan content has been checked in the PDD and compared against the requirements of the monitoring methodology

	<p>All means of implementing the monitoring plan are in line with the applied and monitoring methodology. The validation team has no doubts that the monitoring arrangements as it is already implemented during the first crediting period itself as described in the PDD.</p> <p><b>Sampling plan:</b> As mentioned above, the following parameters will be determined using biennial sample survey:</p> <ul style="list-style-type: none"> <li>(i) Confirmation that non-renewable biomass has been substituted</li> <li>(ii) Average annual consumption of woody biomass per household in the pre-project devices during the project activity, used in parallel.</li> </ul> <p>The PDD indicates a sampling plan as per the recommendation outlined in 'Guideline for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 04/10' (which also has normative reference to Sampling Standard, version 08) has been referred.</p> <p>Assessment team confirms that the sampling method (simple random sampling) is clearly described and is in line with the description of the population. The sampling plan transparently describes how the samples will be selected. PP also demonstrates how simple random sampling is suitable for the project. The PP also provided formula for sample size calculation and reliability requirements in line with the sampling guidelines.</p> <p>Hence, the sampling plan provided in the PDD is found to be appropriate and in line with the sampling guideline.</p>
<b>Findings</b>	CAR-03 is raised and closed satisfactorily
<b>Conclusion</b>	The validation team confirms that the monitoring plan based on the approved monitoring methodology is included in the PDD and is correctly applied to the project. The monitoring plan has been found to be in compliance with the requirements of the applied methodology. The monitoring plan will give opportunity for real measurements of achieved emission reductions. The validation team considers that monitoring arrangements described in the monitoring plan is feasible within the project design.

#### D.6. Crediting period

<b>Means of validation</b>	<p>The validation team checked whether the PP specified the Start date &amp; duration of the 2<sup>nd</sup> crediting period which is in accordance with the applicable requirements in the VVS for PA and the PS for PA.</p> <p>The details provided in the PDD are:</p> <ul style="list-style-type: none"> <li>• Start date of 2<sup>nd</sup> crediting period: 31/05/2021</li> <li>• Length of crediting period: 7 years</li> </ul> <p>The end date of the 1<sup>st</sup> crediting period is 30/05/2021 and the renewal of crediting period is submitted within 1 year from the end of 1<sup>st</sup> crediting period. Hence, considering the start date of 2<sup>nd</sup> crediting period for the project is appropriate.</p> <p>The length of the crediting period is as per the para 87(a) of PS for PA, v2 requirements</p>
<b>Findings</b>	No finding
<b>Conclusion</b>	The start date and the crediting period type & length have been validated and found to be in accordance with 'CDM project standard for project activities', version 2

#### D.7. Project participants

<b>Means of validation</b>	<p>As per the Section A.4 of the PDD, the project participants of the project activity are:</p> <table border="1"> <thead> <tr> <th>Party</th><th>Project participant</th></tr> </thead> <tbody> <tr> <td>India</td><td>Accion Fraterna Ecology Centre</td></tr> </tbody> </table> <p>The names of the CME and project participants are checked and found to be in consistent with the in the latest version of the MoC statement/29/ available in the</p>	Party	Project participant	India	Accion Fraterna Ecology Centre
Party	Project participant				
India	Accion Fraterna Ecology Centre				

	UNFCCC website.
<b>Findings</b>	No finding
<b>Conclusion</b>	The names of Project Participant mentioned in the PDD are in consistent with the latest version of MoC available in the UNFCCC website. Hence, it is in line with the requirements of para 288 of the 'CDM project standard for project activities', version 2

#### D.8. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents <sup>8</sup>	N	NA	NA
Corrections	N	NA	NA
Change to the start date of the crediting period	N	NA	NA
Inclusion of a monitoring plan	N	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	N	NA	NA
Changes to the project design	N	NA	NA
Changes specific to afforestation and reforestation project activities	NA	NA	NA

#### SECTION E. Internal quality control

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The validation report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by 4KES are duly followed and the validation report/opinion is reached in an objective manner and complies with the applicable CDM requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The independent technical reviewer(s) may approve or reject the draft validation report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submit final report to UNFCCC. The final approval decision is taken by the Head of the DOE/Director.

The final decision is authorized by the Director, 4KES, once the report is finalized by the Head of the DOE/DOE Manager.

#### SECTION F. Validation opinion

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4K Earth Science Private Limited has been contracted by 'ACCION FRATERNA ECOLOGY CENTRE' to undertake validation of renewal of crediting period of the CDM registered project 'Accion Fraterna Biogas CDM project for rural communities in Anantapur, Andhra Pradesh' (UNFCCC Ref #3779) in India for renewal of project activities period.

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

The review of the final PDD and the subsequently performed follow-up interviews with representatives of the project participant has provided the validation team with sufficient evidence to determine the validity of the original baseline and/or its update of the project. The PDD correctly applies small scale methodology AMS-

<sup>8</sup> Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

I.E. Version 11. It is demonstrated that the project baseline scenario is not changed and also all necessary parameters are updated correctly for the 2<sup>nd</sup> crediting period.

The monitoring plan provides for the monitoring of the project emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design, and it is the validation team's opinion that the project participants are able to implement the monitoring plan.

The revised ex-ante emission reduction from the PDD is estimated to be 29,784 tCO<sub>2</sub> per year or 208,488 tCO<sub>2</sub> for the entire crediting period of 7 years.

In summary, it is validation team's opinion that the project 'Accion Fraterna Biogas CDM project for rural communities in Anantapur, Andhra Pradesh' (UNFCCC Ref #3779) in India meets all relevant UNFCCC requirements for the renewal of crediting period. Hence 4KES requests the renewal of the crediting period of the project.

## Appendix 1. Abbreviations

Abbreviations	Full texts
4KES	4K Earth Science Private Limited
AMS	Approved Methodology for Small-scale
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
CME	Coordinating/ Managing Entity
COP	Conference of Parties
DOE	Designated Operational Entity
DNA	Designated National Authority
DR	Document Review
EB	Executive Board
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
FCN	Fair Climate Network
FSI	Forest Survey of India
GHG	Greenhouse gas(es)
HCA	Host Country Approval
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
LSC	Local Stakeholder Consultation
LE	Leakage Emissions
LoA	Letter of Approval/Authorization
ISO	International Organization for Standardization
MNRE	Ministry of New & Renewable Energy
MOP	Meeting of Parties
MoC	Modalities of Communication
MoV	Means of Verification
MP	Monitoring Plan
NCV	Net Calorific Value
NRB	Non-Renewable Biomass
ODA	Official Development Assistance
PA	Project Activity
PDD	Project Design Document
PE	Project Emissions
PP	Project Participant
PS	Project Standard
PCP	Project Cycle Procedure
QA/QC	Quality Assurance/Quality Control
RCP	Renewal of Crediting period
SDG	Sustainable Development Goal
SSC	Small Scale
T&C	Technical & Certification
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation & Verification Standard

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

<b><u>Certificate of Competence</u></b>						
<b>Name</b>	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	<b>Narendra Kumar .R</b>				
<b>Qualification Procedure</b>	<i>Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.</i>					
<b>Appointed to work as:</b>						
	<b>CDM Validator/Verifier</b>	<b>Team Leader</b>	<b>Team Member</b>	<b>Technical Expert</b>	<b>Technical Reviewer</b>	<b>Financial Expert</b>
<i>Appointed</i>	Yes	Yes	Yes	Yes	Yes	No
<i>Appointed Date</i>	27-04-2021					
<b>Authorized to work as Technical Expert for:</b>						
<i>Authorized Technical Area</i>	<b>Sectoral Scope</b>		<b>TA Code</b>	<b>Technical Area within the scope</b>		
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
	Energy demand		3.1	Energy demand		
	Waste handling and disposal		13.1	Solid waste and wastewater		
	Waste handling and disposal		13.2	Manure		
<b>Authorized to work as Local Expert for:</b>						
<i>Country/Countries</i>	India					
<b>Compliance check by:</b> Anand S. R.						

<b><u>Certificate of Competence</u></b>						
<b>Name</b>	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	<b>Anand S.R</b>				
<b>Qualification Procedure</b>	<i>Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.</i>					
<b>Appointed to work as:</b>						
	<b>CDM Validator/Verifier</b>	<b>Team Leader</b>	<b>Team Member</b>	<b>Technical Expert</b>	<b>Technical Reviewer</b>	<b>Financial Expert</b>
<i>Appointed</i>	No	No	Yes	No	No	No
<i>Appointed Date</i>	29-07-2019					
<b>Authorized to work as Technical Expert for:</b>						
<i>Authorized Technical Area</i>						
<b>Authorized to work as Local Expert for:</b>						
<i>Country/Countries</i>	India					

<b><u>Certificate of Competence</u></b>						
<b>Name</b>	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	<b>Ma Paa Puratchikkanal</b>				
<b>Qualification Procedure</b>	<i>Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.</i>					
<b>Appointed to work as:</b>						
	<b>CDM Validator/Verifier</b>	<b>Team Leader</b>	<b>Team Member</b>	<b>Technical Expert</b>	<b>Technical Reviewer</b>	<b>Financial Expert</b>
<i>Appointed</i>	Yes	Yes	Yes	Yes	Yes	No
<i>Appointed Date</i>	27-04-2021					
<b>Authorized to work as Technical Expert for:</b>						
<i>Authorized Technical Area</i>	<b>Sectoral Scope</b>		<b>TA Code</b>	<b>Technical Area within the scope</b>		
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
	Energy demand		3.1	Energy demand		
	Construction		6.1	Construction		
	Waste handling and disposal		13.1	Solid waste and wastewater		
	Waste handling and disposal		13.2	Manure		
Agriculture		15.1	Agriculture			
<b>Authorized to work as Local Expert for:</b>						
<i>Country/Countries</i>	India, Sri Lanka					
<b>Compliance check by:</b> Anand S. R.						



### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Accion Fraterna	Updated Project Design Document	Version 09, dated 05/04/2021	Accion Fraterna
	Accion Fraterna	Updated Project Design Document	Version 10, dated 18/05/2021	Accion Fraterna
	Accion Fraterna	Updated Project Design Document	Version 11, dated 01/08/2021	Accion Fraterna
	Accion Fraterna	Updated Project Design Document	Version 12, dated 05/10/2021	Accion Fraterna
2	Accion Fraterna	Revised ER Estimation sheet	Version 09, dated 05/04/2021	Accion Fraterna
	Accion Fraterna	Revised ER Estimation sheet	Version 10, dated 18/05/2021	Accion Fraterna
	Accion Fraterna	Revised ER Estimation sheet	Version 11, dated 01/08/2021	Accion Fraterna
	Accion Fraterna	Revised ER Estimation sheet	Version 12, dated 05/10/2021	Accion Fraterna
3	Accion Fraterna	Registered PDD (applicable for 1 <sup>st</sup> crediting period)	Version 8, dated 21/06/2017	Publicly available
4	PJR	Validation Report	Revision 1.1, dated 19/01/2012	Publicly available
5	UNFCCC	AMS.I.E – “Switch from non-renewable biomass for thermal applications by the user”	<a href="#">Version 11</a>	Publicly available
6	IPCC	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	<a href="#">Web Link</a>	Publicly available
7	UNFCCC	Kyoto Protocol (1997)	<a href="#">Web Link</a>	Publicly available
8	UNFCCC	Project design document form	<a href="#">Version 11</a>	Publicly available
9	UNFCCC	CDM Project Standard for project activities	<a href="#">Version 02</a>	Publicly available
10	UNFCCC	Standard: Sampling and surveys for CDM project activities and programme of activities	<a href="#">Version 08</a>	Publicly available
	UNFCCC	Guidelines for sampling and surveys for CDM project activities and programme of activities	<a href="#">Version 04</a>	Publicly available
11	UNFCCC	CDM Validation and Verification Standard for project activities	<a href="#">Version 02</a>	Publicly available
12	UNFCCC	Glossary “CDM terms”	<a href="#">Version 10</a>	Publicly available
13	UNFCCC	TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	<a href="#">Version 3.0.1</a>	Publicly available
14	UNFCCC	CDM project cycle procedure for project activities	<a href="#">Version 02</a>	Publicly available
15	UNFCCC	Tool 16: Project and leakage emissions from biomass	<a href="#">Version 04</a>	Publicly available
16	UNFCCC	Tool 30: Calculation of the fraction of non-renewable biomass	<a href="#">Version 03</a>	Publicly available
17	Accion Fraterna	Kitchen Performance Test Documents: <ul style="list-style-type: none"> <li>KT monitoring survey sheets</li> <li>Survey result summary excel sheet</li> </ul>	-	Accion Fraterna
18	Accion Fraterna	Sample survey sheets	-	Accion Fraterna
19	Accion Fraterna	Project database	-	Accion Fraterna

20	Accion Fraterna	End user agreements	-	Accion Fraterna
21	Accion Fraterna	Online monitoring solution	-	Accion Fraterna
22	Forest Survey of India, MoEF & CC	State of Forest Report	<a href="#">Year 2019</a>	Publicly available
23	Meenakshi Kaul · G. M. J. Mohren · V. K. Dadhwal	Research Paper: Phytomass carbon pool of trees and forests in India	-	Accion Fraterna
24	Centre for Science and Environment	Status Report: Wood is Good. But is India doing Enough to meet Its present and future needs?	-	Publicly available
25	Ratnam, J., Chengappa, S. K., Siddarth, J., Machado, Nandita Nataraj, Anand M. Osuri and Mahesh Sankaran.	<i>Functional Traits of Trees From Dry Deciduous Forests of Southern India Suggest Seasonal Drought and Fire Are Important Drivers. Frontiers in Ecology and Evolution. Brief Research Report, 2019, doi: 10.3389/fevo.2019.00008</i>	-	Publicly available
26	Directorate Of Census Operations	District Census Handbook- Anantapur <a href="https://cdn.s3waas.gov.in/s333e8075e9970de0cfea955afd4644bb2/uploads/2019/07/2019071836.pdf">https://cdn.s3waas.gov.in/s333e8075e9970de0cfea955afd4644bb2/uploads/2019/07/2019071836.pdf</a>	-	Publicly available
27	Ministry of Statistics and Programme Implementation	NSS Report: Drinking water, sanitation, hygiene and housing condition in India,	76 <sup>th</sup> Round	Publicly available
28	Accion Fraterna	Excel sheet for calculation of rotation period of dominant species in Andhra Pradesh	-	Accion Fraterna
29	Accion Fraterna	Latest MOC	Dated 12/04/2012	Publicly available
30	FAO	Report: Forest Products <a href="http://www.fao.org/3/i7304m/i7304m.pdf">http://www.fao.org/3/i7304m/i7304m.pdf</a>	Year 2005	Publicly available
	FAO	Report: Forest Product <a href="http://www.fao.org/3/cb3795m/cb3795m.pdf">http://www.fao.org/3/cb3795m/cb3795m.pdf</a>	Year 2011	Publicly available
31	<a href="https://www.indiagrowing.com/">https://www.indiagrowing.com/</a>	Andhra Pradesh & Telangana Population 2020/2021 <a href="https://www.indiagrowing.com/Telangana">https://www.indiagrowing.com/Telangana</a> <a href="https://www.indiagrowing.com/Andhra Pradesh">https://www.indiagrowing.com/Andhra Pradesh</a>	2020/2021	Publicly available
32	PPAC, NFHS	<a href="https://www.thehindu.com/data/data-most-homes-have-lpg-connection-but-a-significant-share-dont-use-it/article34855341.ece">https://www.thehindu.com/data/data-most-homes-have-lpg-connection-but-a-significant-share-dont-use-it/article34855341.ece</a>		Publicly available
33	FSI	<a href="https://fsi.nic.in/documents/sfr_1995_hindi.pdf">https://fsi.nic.in/documents/sfr_1995_hindi.pdf</a> ; Page 74	1995	Publicly available
34	MOEF	Asia-Pacific Forestry Sector Outlook Study II- Country report <a href="http://moef.gov.in/wp-content/uploads/2019/06/Pacific.pdf">http://moef.gov.in/wp-content/uploads/2019/06/Pacific.pdf</a>		Publicly available
35	International Institute for Population Sciences	National Family Health Survey – 5 <a href="http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_AP.pdf">http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_AP.pdf</a>	2019-20	Publicly available
36	Accion Fraterna	fNRB calculation sheet	-	Accion Fraterna
37	FSI	Report: Trees outside forest resources in India	2020	Public

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

Table 1. CL from this validation

CL ID	01	Section no.	D.3	Date:	19/05/2021
<b>Description of CL</b>					
<p>Regarding the fuelwood and timber consumption data for fNRB calculation, it is noted that the table in the cited literature "Wood is Good, but is India doing enough to meet its present and future needs? A status report by CSE, 2017" is sourced from "India State of Forest Report, FSI, 2011". PP is requested to justify why the most recent available data are not used. Refer to the requirements in paragraph 10 of TOOL30, which states: "...In the case of ex ante calculation of fNRB, the parameter fNRB shall be estimated using the most recent historical year for which data is available....Where available, the same vintage of data should be used for all parameters applied in this tool to calculate fNRB. Where data for one single vintage is not available for all parameters, different vintages may be used for parameters, as long as it can be justified (e.g. the use of different vintages leads to a conservative estimate of fNRB)."</p> <p>Also, it appears that the values of FSI 2011 cover the data of both Andhra Pradesh and Telangana states, the latter of which has been separated from Andhra Pradesh. On the other hand, the value of RB is derived from FSI 2019 where only the data of the new Andhra Pradesh (after separation) seems to be counted. Therefore, PP is requested to address inconsistent data coverage between H (estimate of consumption) and RB (growth).</p>					
<b>Project participant response</b>					<b>Date:</b> 20/05/2021
<p><i>The latest data available at the state level is the CSE Report of 2017. But again the data used is from FSI, 2011. Hence based on national trend of Roundwood use, the value of 2011 is extrapolated to 2019. As there is a decreasing trend in Roundwood use, the H is also decreased for the calculations. This is a conservative approach.</i></p> <p><i>This is revised now to include both the states. For the calculations of RB and fNRB, data of both the separated states Andhra Pradesh and Telangana is considered. This is done as the H value is available for the erstwhile Andhra Pradesh which included both states.</i></p> <p><i>With both the above corrections the fNRB is revised from 0.91 to 0.86.</i></p>					
<b>Documentation provided by project participant</b>					
Revised PDD and ER Calculations Sheet					
<b>DOE assessment</b>					<b>Date:</b> 22/05/2021
<p>As only the 2011 data available, PP now extrapolated the fuel wood consumption of 2019 based on the round wood consumption trend (which includes fuel wood and industrial wood consumption) which is derived from FAO data. The calculation is checked and found to be correct.</p> <p>Also the fuel wood consumption for Telangana and Andhra Pradesh is not available separately. Hence, the RB is also now calculated as total of Telangana and Andhra Pradesh. Hence, this is acceptable.</p> <p>CL is closed.</p>					

Table 2. CAR from this validation

CAR ID	01	Section no.	D.1	Date:	19/05/2021
<b>Description of CAR</b>					
<p>In Section A.1 of the PDD and summary sheet of the ER calculation sheet, the UNFCCC reference number of the project is incorrectly mentioned. Corrective action is requested.</p>					
<b>Project participant response</b>					<b>Date:</b> 20/05/2021
<p><i>The UNFCCC reference number of the project is corrected to 3779.</i></p>					
<b>Documentation provided by project participant</b>					
Revised PDD and ER Calculations Sheet					
<b>DOE assessment</b>					<b>Date:</b> 22/05/2021
PP has corrected the UNFCCC reference number in PDD & ER sheet. CAR is closed.					

<b>CAR ID</b>	02	<b>Section no.</b>	D.2	<b>Date:</b> 19/05/2021
<b>Description of CAR</b>				
In section B.3 of the PDD, the gases included in the table and the justification provided are not appropriate: <ul style="list-style-type: none"> <li>Leakage emission is included in baseline scenario</li> <li>In the project scenario, CH<sub>4</sub> &amp; N<sub>2</sub>O emission are included</li> </ul> Corrective action is requested				
<b>Project participant response</b>				<b>Date:</b> 20/05/2021
<i>The table in section B.3. is revised. The leakage emission from baseline scenario is deleted. In the Project Scenario, leakage is included and CH<sub>4</sub> and N<sub>2</sub>O emissions are excluded according to the methodology.</i>				
<b>Documentation provided by project participant</b>				
<i>Revised PDD</i>				
<b>DOE assessment</b>				<b>Date:</b> 22/05/2021
Appropriate corrections are done in the table in section B.3. The leakage emission from baseline scenario is deleted. In the Project Scenario, leakage is included and CH <sub>4</sub> and N <sub>2</sub> O emissions are excluded according to the methodology. CAR is closed				

<b>CAR ID</b>	03	<b>Section no.</b>	D.5	<b>Date:</b> 19/05/2021
<b>Description of CAR</b>				
The confidence/precision level for the parameter 'Confirmation that non-renewable biomass has been substituted' is inconsistently mentioned in the PDD. As per the parameter table in the section B.7.1, the confidence/precision requirement is 95/10 whereas, as per section B.7.2, the confidence/precision requirement is 90/10. Corrective action is requested.				
<b>Project participant response</b>				<b>Date:</b> 20/05/2021
<i>The confidence/precision requirement is 95/10 as the parameter is monitored once in 2 years. This is made consistent in the revised PDD. The confidence/precision requirement is corrected to 95/10 in section B.7.2</i>				
<b>Documentation provided by project participant</b>				
<i>Revised PDD</i>				
<b>DOE assessment</b>				<b>Date:</b> 22/05/2021
The applicable confidence and precision level is 95/10. PP corrected the confidence/precision level in section B.7.2. CAR is closed.				

<b>CAR ID</b>	04	<b>Section no.</b>	D.3	<b>Date:</b> 19/05/2021
<b>Description of CAR</b>				
PP shall submit the following documents: <ul style="list-style-type: none"> <li>Sample survey/KPT sheets</li> <li>All documents/reports referenced in the MR</li> </ul>				
<b>Project participant response</b>				<b>Date:</b> 20/05/2021
<i>The following documents are submitted:</i> <ul style="list-style-type: none"> <li><i>Sample survey/KPT sheets</i></li> <li><i>Reports referenced in the MR</i></li> </ul>				
<b>Documentation provided by project participant</b>				
<i>Sample Surveys/KPT Sheets</i> <i>References</i>				
<b>DOE assessment</b>				<b>Date:</b> 22/05/2021
PP has provided the requested documents for verification. CAR is closed.				

Table 3. FAR from this validation

<b>FAR ID</b>	01	<b>Section no.</b>	-	<b>Date:</b> 02/03/2021
<b>Description of FAR</b>				
Since the project crediting period is starting on 1 January 2021, as mentioned in para 7 of EB 108 report, the project participants shall: <ol style="list-style-type: none"> <li>apply any GWP values that may be adopted by the CMP for the period from 1 January 2021 in their monitoring reports and relevant forms for any emission reductions achieved on or after 1 January 2021 by the activity as it may be applicable; and</li> <li>Update their project design document in accordance with any requirements of the CMP guidance.</li> </ol>				

<b>Project participant response</b>	<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>	
<b>DOE assessment</b>	<b>Date:</b> DD/MM/YYYY

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**Document information**

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