



Gold Standard[®]
for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & PROGRAMME DESIGN DOCUMENT (POA-DD)

PUBLICATION DATE **14.04.2023**

VERSION **2.2**

RELATED SUPPORT

- [Programme of Activity requirements](#)
 - [TEMPLATE GUIDE Key Project Information & PoA Design Document v.2.2.1](#)
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This document contains the following Sections

Key Project Information

SECTION A- General description of PoA

SECTION B - Management System and Inclusion Criteria

SECTION C – Demonstration of additionality

SECTION D – Duration of PoA

SECTION E - Outcome of Stakeholder Consultations

0 – Contact information of coordinating/managing entity and responsible person(s)/
entity(ies)

Appendix 2 - Design Changes

KEY PROJECT INFORMATION

<p>GS ID of Programme</p>	<p>Nepal Biogas Support Program- PoA (GS ID 3110)</p> <p>Nepal Biogas Support Program –CPA 1: 20,000 digesters (GS ID 3109)</p> <p>Nepal Biogas Support Program –CPA 2: 19,927 digesters (GS ID 3113)</p> <p>Nepal Biogas Support Program –CPA 3: 19,959 digesters (GS ID 3114)</p> <p>Nepal Biogas Support Program –CPA 4: 19,970 digesters (GS ID 3116)</p> <p>Nepal Biogas Support Program - CPA 5: 19,842 digesters (GS ID 3566)</p> <p>Nepal Biogas Support Program - CPA 6: 18,504 digesters (GS ID 6393)</p> <p>Nepal Biogas Support Program - CPA 7: 18,392 digesters (GS ID 6394)</p> <p>Nepal Biogas Support Program - CPA 8: 19,445 digesters (GS ID 7508)</p> <p>Nepal Biogas Support Program - CPA 9: 17,304 digesters (GS ID 7509)</p> <p>Nepal Biogas Support Program - CPA 10: 10,589 digesters (GS ID 10739)</p>
<p>Title of Programme:</p>	<p>Nepal Biogas Support Program- PoA</p> <p>Nepal Biogas Support Program –CPA 1: 20,000 digesters</p> <p>Nepal Biogas Support Program –CPA 2: 19,927 digesters</p> <p>Nepal Biogas Support Program –CPA 3: 19,959 digesters</p> <p>Nepal Biogas Support Program –CPA 4: 19,970 digesters</p> <p>Nepal Biogas Support Program - CPA 5: 19,842 digesters</p>

	<p>Nepal Biogas Support Program - CPA 6: 18,504 digesters</p> <p>Nepal Biogas Support Program - CPA 7: 18,392 digesters</p> <p>Nepal Biogas Support Program - CPA 8: 19,445 digesters</p> <p>Nepal Biogas Support Program - CPA 9: 17,304 digesters</p> <p>Nepal Biogas Support Program - CPA 10: 10,589 digesters</p>
Type of PoA	<input type="checkbox"/> Non – Forestry and/or Non -AGR PoA <input type="checkbox"/> Forestry and/or AGR PoA
VPAs scale included in the PoA <i>Note that same PoA can included VPAs of different scales. Please select all applicable.</i>	<input type="checkbox"/> Microscale <input checked="" type="checkbox"/> Small scale <input type="checkbox"/> Large scale
Start Date of POA	22/06/2007
Date of Design Certification	25/01/2019
Start date of crediting cycle of PoA	31/01/2025 – 30/01/2030
Version number of the PoA-DD	1.0
Completion date of the PoA-DD	31/01/2025
Coordinating/managing entity	Alternative Energy Promotion Centre
Project Participants and any communities involved	atmosfair gGmbH;
Host Country (ies)	
Activity Requirements applied	<input checked="" type="checkbox"/> Community Services Activities <input type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
Other Requirements applied	
Methodology (ies) applied and version number	AMS-I-E: Switch from non-renewable biomass for thermal applications by the user (Version 13.0)

Product Requirements applied

- [GHG Emissions Reductions & Sequestration](#)
- [Renewable Energy Label](#)
- N/A

REAL CASE VPAS (ALL REAL CASE VPAS INCLUDED IN THE POA)

GS ID	Title
GS0000	
GS0000	
GS0000	

SECTION A. General description of PoA

A.1. Purpose and general description of the PoA

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The Biogas Support Program (BSP) aims at implementing household biogas applications. These applications displace firewood and fossil fuels with biogas from animal waste and human excreta. The biogas is used as a fuel for cooking, therefore the displacement of non renewable biomass (NRB) is counted as emission reduction under the Clean Development Mechanism (CDM) and Gold Standard (GS). Target group under the BSP are households with at least one head of cattle (generally cows or buffalos) who currently use non-renewable biomass (firewood) for cooking purpose. The baseline of the PoA considers only non-renewable biomass replaced through household biogas applications. Only households previously using non-renewable biomass are eligible to the PoA.

Nepal Biogas Support Program-PoA was registered on 31st January 2013 in UNFCCC as CDM PoA. Until now, 10 CPAs are already included in the PoA. The UNFCCC reference number of the PoA is 9572. The PoA and corresponding first 10 CPAs are retroactively registered in Gold Standard. Recently, the PoA is transited from CDM GS CER to GS VER on 3rd November 2023. Other 3 consecutive CPAs (CPA-5, CPA-6 and CPA-7) are included in GS on 3rd November 2023. The second crediting renewable period of the PoA is 31st January 2020 to 30th January 2025. The PoA start date is 22nd June 2007, which belongs to the first date of biogas construction under the PoA. Figure below shows the schematic diagram of the technology implemented under the PoA.

A.2. Physical/ Geographical boundary of the PoA

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All the specific case CPAs are implemented across Nepal in different districts. The geographical coordinates of Nepal are:

Latitude – North 26.20 degree to North 30.45 degree

Longitude – East 80.07 degree to East 88.20 degree

All 10 CPAs have biogas plants implemented across the Nepal under this PoA

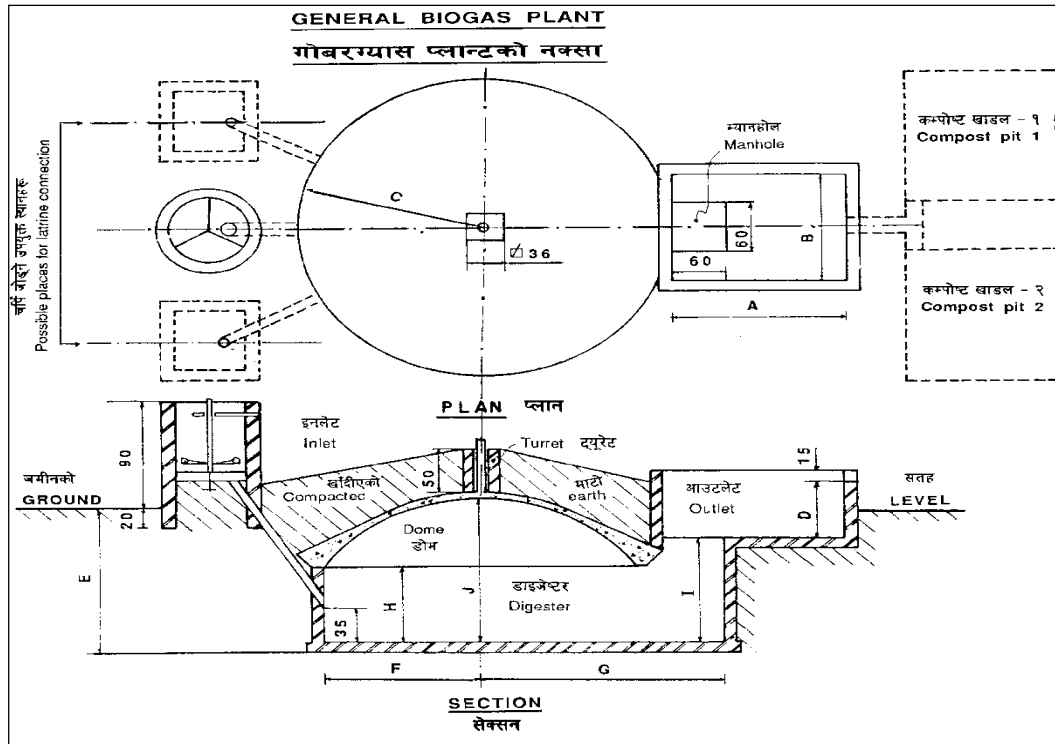
A.3. Technologies/measures

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The technologies used in this PoA are household biogas digesters with a sludge and gas holding capacity range of up to 10 m³. The different sizes of the digesters that would be included in the programme would be of 2, 4, 6, 8 and 10 m³. The programme uses only one design i.e. GGC 2047 model. The biogas digesters

are based on a uniform technical design and are manufactured and installed following established technical standards in Nepal. The digester itself is a closed underground container made of concrete or other materials.

Biogas Model GGC 2047



Biogas plants constructed under this PoA comprise of three major components; the inlet, the digester and the outlet, aligned in a straight line. All these structures are prepared of masonry walls of bricks or stones, depending upon the material availability. Digester unit is an underground chamber where the mixture of animal dung and water is fed into where the microbial activity takes place. The microbes act upon the dung (the substrate) under anaerobic conditions to release methane and carbon dioxide. The methane released from the digester is collected at the dome which is connected to gas hose pipe fitted at turret at the center of the dome. Biogas collected at the dome dispensed to biogas stove through this gas hose pipe via turret. Once the gas pressure is sufficient in dome, it exerts pressure to the slurry in the digester and slurry is released from the outlet. The operational lifetime of each digester is 20 years.

A.4. Target/Indicator for each of the minimum three SDGs targeted by the PoA

SDGs assessment is conducted at the VPA level. CME shall provide the information in the VPA DD and may also summarize the outcome in the Table below.

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SDG IMPACT

SUSTAINABLE DEVELOPMENT GOALS TARGETED	MOST RELEVANT SDG TARGET	INDICATOR (SELECTED IN SDG TOOL)
13 Climate Action (mandatory)	Amount of GHGs emissions avoided	Reduction in GHGs emissions
3 Good Health and Well Beings	Average annual consumption of woody biomass per household in the pre-project devices during the project activity	Reduction incidence of disease caused by air pollutants
3.9.1 Mortality rate attributed to household and ambient air pollution	Quantity of woody biomass that is substituted or displaced	Reduction incidence of disease caused by air pollutants
3.9.1 Mortality rate attributed to household and ambient air pollution	Net calorific value of the non-renewable biomass that is substituted	Reduction incidence of disease caused by air pollutants
3.9.1 Mortality rate attributed to household and ambient air pollution	Users' perception on reduction in indoor air pollution	Reduction incidence of disease caused by air pollutants
3.9.1 Mortality rate attributed to household and ambient air pollution	Users' perception on reduction in health problem	Reduction incidence of disease caused by air pollutants
3.9.1 Mortality rate attributed to household and ambient air pollution	User's perception in Time saving for the cooking (reduce exposure to indoor air pollution)	Reduction incidence of disease caused by air pollutants

<p>3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)</p>	<p>Users’ perception on connection of toilet to biogas</p>	<p>Substantially reduce the number of deaths and illness from hazardous chemicals and air water and soil pollution and contamination</p>
<p>3.9.3 Mortality rate attributed to unintentional poisoning</p>	<p>Users perception in reduction of chemical fertilizers (use of Farmyard manure, Bio-slurry, Urea, DAP and Potash)</p>	<p>Substantially reduce the number of deaths and illness from hazardous chemicals and air water and soil pollution and contamination</p>
<p>7: Affordable and Clean Energy</p>		
<p>7.1.2 Proportion of population with primary reliance on clean fuels and technology</p>	<p>Users’ perception on time saving due to project for firewood collection (For men, women and children)</p>	<p>Ensure universal access to affordable, reliable and modern energy services</p>
<p>7.1.2 Proportion of population with primary reliance on clean fuels and technology</p>	<p>Number of people trained to promote Biogas plants</p>	<p>Ensure universal access to affordable, reliable and modern energy services</p>

A.5. Coordinating/managing entity

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Alternative Energy Promotion Centre is a Coordinating/managing Entity for this PoA.

A.6. Funding sources of PoA

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The digesters listed in the CPA receive subsidies and technical support under the BSP program. The BSP program is funded by the entities listed below. These include:

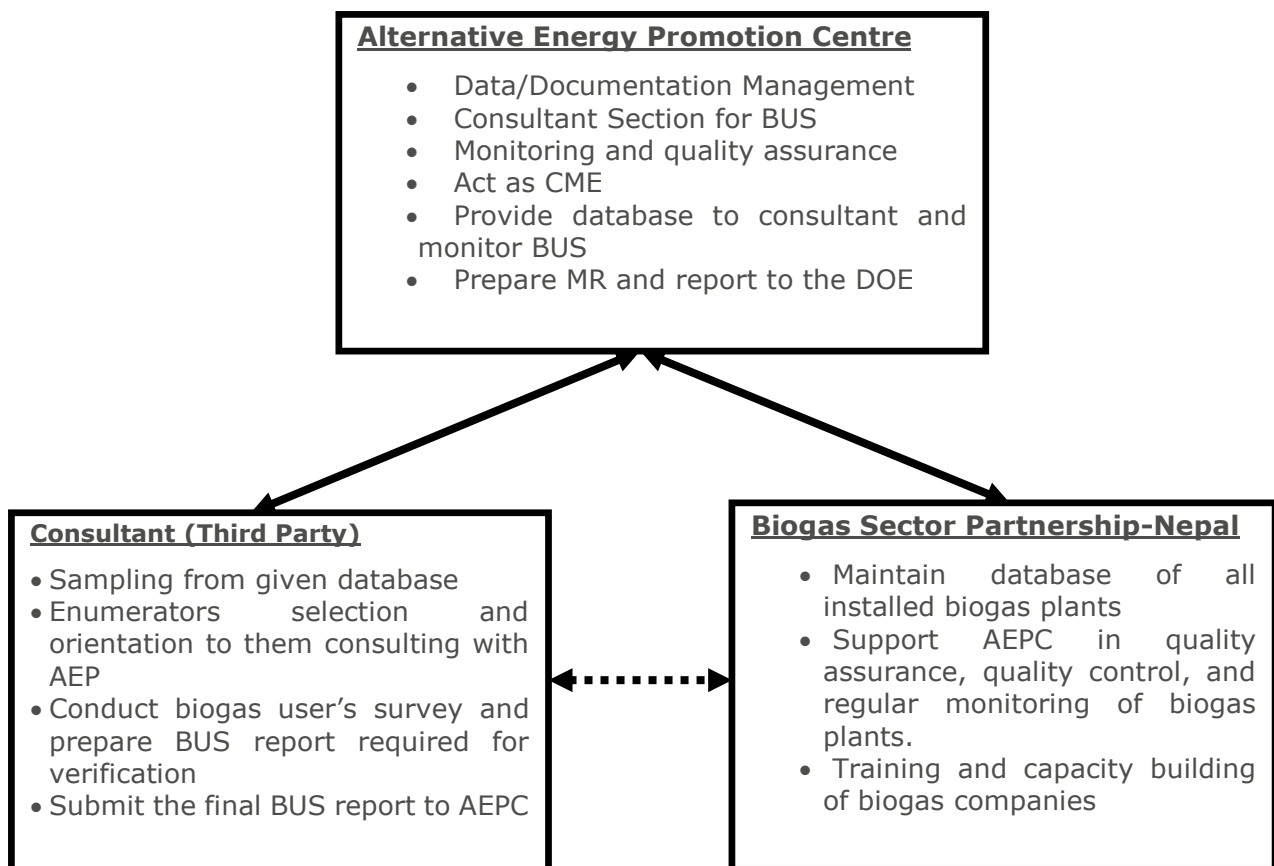
- Danida
- Norway

SECTION B. MANAGEMENT SYSTEM AND INCLUSION CRITERIA

B.1. Management System

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As a CME as well as CPA implementer, AEPC maintains the database of the biogas plants installed by the pre-qualified companies. On the behalf of AEPC, Biogas Sector Partnership Nepal (BSP-Nepal), a national level non-governmental organization keeps the database for the PoA. BSP-Nepal facilitates and provides technical assistance to biogas companies, processes the subsidy applications and recommend AEPC for subsidy reimbursement to the users through BCs. It also assists in conducting quality control and regular monitoring of the installed biogas digesters and developing skill enhancement among BCs. The Biogas User’s Survey is conducted every year as a basis for emission reduction calculation. The third party (consultant) conducts the Biogas User Survey. Based on the survey, AEPC prepares monitoring report and maintain all required documents for verification. The roles and responsibilities of each entity for GHG monitoring are shown below:



B.2. Application of methodologies

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The methodology AMS-I.E: “Switch from Non-Renewable Biomass for Thermal Applications by the User”, version 04 was used for the PoA during first crediting period. The same methodology with version 9.0 is applied for crediting period renewable for the second crediting period. The applicability of the methodology is outlined as below:

Criteria AMS-I.E.	Explanation
The methodology is applicable for technologies displacing use of non-renewable biomass by renewable energy.	The PoA will replace non-renewable biomass by introducing the biogas digester producing renewable energy.
Small-Scale project requirement: For biomass, biofuel and biogas project activities, the maximal limit of 15MW(e) is equivalent to 45 MW thermal output of the equipment or the plant (e.g. boilers). For thermal applications of biomass, biofuels or biogas (e.g. the cookstoves), the limit of 45 MWth is the installed/rated capacity of the thermal application equipment or device/s (e.g. biogas stoves).	The biogas capacity of each stove is 400 litre/hour. With a methane content of 52%, this gives an annual natural gas capacity of not more than 1.86 kW _{th} per stove (validated during registration). This means that around 24,000 stoves would still have an aggregated capacity below the 45MW _{th} small scale threshold value, however the CPA will be limited to 20000 stoves only.
This methodology comprises of activities to displace the use of non-renewable biomass by introducing renewable energy technologies. Examples of these technologies include, but are not limited to biogas stoves, bio-ethanol stoves, solar cookers, passive solar homes.	The digesters are indeed “small thermal appliances that displace the use of non-renewable biomass by introducing new renewable energy end-user technologies”. AMS-I.E. even lists biogas stoves as an example of eligible end user technologies.
Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	The BUS conducted in 2018 for PoA demonstrated that the time needed to gather firewood, the price of firewood and the distance travelled to gather firewood is increasing at least since December 1989. In that survey the respondents were asked to provide averages for the time needed to gather firewood, the distance travelled and the price. The average of the estimates from all respondents, showed a clear increase on all three indicators.
For project activities introducing bio-ethanol cook-stoves, project participants or coordinating and managing entities shall demonstrate that the bio-ethanol cook-stoves are designed, constructed and	The PoA does not include the bio-ethanol cookstoves and hence this is not applicable for this PoA.

<p>operated to the requirements (e.g. with regard to safety) of a relevant national or local standard or comparable literature. Latest guidelines issued by a relevant national authority or an international organization may also be used.</p>	
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B.2.1. Multiple technologies/measures

>>NA

B.3. Eligibility criteria for inclusion of a VPA in the PoA

ELIGIBILITY CRITERION	DESCRIPTION/ REQUIRED CONDITION	MEANS OF VERIFICATION/SUPPORTI NG EVIDENCE FOR INCLUSION
<p>1 Geographical boundary</p>	<p>-All biogas digesters in the CPA are located within the geographical boundaries of Nepal. - This will be confirmed by the CME by ensuring that each individual installation is a) located at an address that lies within the geographical boundaries of Nepal as demonstrated by providing the address of all biogas digesters in the CPA database; and b) has GPS coordinates that are situated within the geographical boundaries of Nepal.</p>	<p>- Commissioning Report from Biogas Companies (BC). - CPA Database indicating digester code, address and GPS coordinate.</p>

<p>2</p> <p>Double counting</p>	<ul style="list-style-type: none"> -Double counting is avoided by assuring that no digester is already included to a different CDM project or VPA. - This is confirmed by the CME based on a) the digester codes listed in the BSP database and b) if necessary also GPS coordinates (the latter applies if biogas projects emerge under the CDM that is not part of the BSP). 	<ul style="list-style-type: none"> -VPA Database indicating digester code, address and GPS coordinate. - Unique GPS reading of each digester. - CDM website indicating potential further projects not included to BSP using the same technology
<p>3</p> <p>Technology</p>	<ul style="list-style-type: none"> -AEPC has implemented this VPA as part of the BSP. - All digesters listed in the CPA are household biogas digesters with a sludge and gas holding capacity range of 2-10 m³. -Biogas is supplied to a stove with a maximum capacity of 400 l/h leading to a maximum annual gas capacity of not more than 1.86 kWth per stove. - The equipment for each biogas plant installation under VPA is new and not transferred from other project activities. 	<ul style="list-style-type: none"> -Commissioning Report from Biogas Companies (BC). - Technical specification documents detailing digester models and equipment applied.

4	Start Date	<p>-The start date of a VPA is the date of commissioning of the first biogas digester included to that respective VPA.</p> <p>- The start date of CPA 1 is 22/06/2007, which is the date of commissioning of the first digester in VPA 1.</p> <p>-The date of commissioning is recorded in the Commissioning Report, which is archived and the date recorded in the VPA database.</p>	<p>-Commissioning Report from Biogas Companies (BC), indicating the commissioning date.</p> <p>-VPA Database</p>
5	Compliance with applied methodology	<p>-The activity replaces non-renewable biomass. This will be confirmed through documenting that participating households use non-renewable biomass as firewood.</p>	<p>-Report confirming use of nonrenewable biomass as firewood prior to installation of digesters (e.g. BUS)</p>
6	Diversion of official development assistance	<p>-The VPA does not result into the diversion of official development assistance.</p>	<p>-Declaration from VPA implementer/AEPC.</p> <p>- Confirmation of ODA non diversion.</p>
7	Target Group and distribution mechanism	<p>-The target groups within the VPA are households.</p>	<p>-Installation confirmation from Biogas Companies (BC) indicating that the digesters are installed in a household.</p>

8	Threshold Check	-Number of biogas digester included in each VPA shall not exceed 20,000 units, which assures compliance with the small scale limit of 45MWth. ¹	-BSP/AEPC database to confirm the number of digesters in VPA is maximum 20,000.
9	Other / Voluntary action	- Each CPA to be included in this PoA should be a voluntary action and not mandated by the Government of Nepal	- Confirmation that each VPA is a voluntary action not mandated by the Government of Nepal

¹ Estimated maximum capacity of 1.86 kWth per stove. Considering that the limit for SSC is 45 MW_{th}, the maximum number of digesters allowed under a CPA (20,000) remains well below the SSC threshold.

SECTION C. DEMONSTRATION OF ADDITIONALITY

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Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).

Guidelines on the demonstration of additionality of small scale project activities" (version 09) EB 68 Annex 27.

Describe how the proposed VPA meets the criteria for deemed additionality.

The paragraph 2 of this guideline states that, "Documentation of barriers, as per paragraph 1 above is not required for the positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds (e.g. installed capacity up to 15 MW)"

The sub-section 2 (c) of paragraph states that, "Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds."

Each unit of biogas digester has the capacity of not more than 1.86 kWth which is less than 5% of the small-scale CDM threshold, or 750 kW installed capacity. The PoA is thus additional and there is no need for further assessment and demonstration of additionality.

SECTION D. DURATION OF PoA

D.1. Date of first submission of PoA to Gold Standard

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22/06/2007, First digester construction date under CPA-1.

D.2. Duration of the PoA

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The length of the PoA is 21 years.

SECTION E. OUTCOME OF PoA LEVEL STAKEHOLDER CONSULTATION

E.1. Summary of stakeholder consultation at PoA Level

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Please refer to the section D.14 of the CDM-SSC-PoA-DD for the stakeholder consultation as per CDM requirement. The LSC for GS was conducted on PoA level. The detail of it is given in section E of the PoA Passport.

For the crediting period renewal of PoA, stakeholder feedback round was started on 6th May 2019. A public notice was published in AEPC's website to provide the feedback on PoA DD, Similarly, the notice and the related documents were also published in atmosfair gGmbH's website as well. For follow-up, an e-mail was also sent to the related stakeholders to provide the feedback on the documents.

During the stakeholder feedback round which was started on 6th May 2019 for two months, no comments/feedbacks were received for CPA-9.

E.2. Consideration of stakeholder comments received

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NA

E.3. Final Continuous Input / Grievance Mechanism at PoA Level

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METHOD

INCLUDE ALL DETAILS OF CHOSEN METHOD (S) SO THAT THEY MAY BE UNDERSTOOD AND, WHERE RELEVANT, USED BY READERS.

Continuous Input / Grievance Expression Process Book (mandatory)	Grievance Registration and continuous input: Grievance section: www.aepc.gov.np Alternative Energy Promotion Centre (AEPC) Phone +9771-4498013, 4498014 Fax : +9771-5542397, 5539392
GS Contact (mandatory)	help@goldstandard.org
Other	Nepal biogas promoters association Central Office Kathmandu: Phone: 01- 5535116 Nepal biogas promoters association regional offices: 1. Pokhara: Phone: 061-526785 2. Butwal: Phone: 071-551514 3. Itahari: Phone: 025-5817745 4. Nepalgunj: Phone: 081-528066 5. Dhangadi: Phone: 091- 527379 6. Chitwan: Phone: 056- 521749

APPENDIX 1 - CONTACT INFORMATION OF COORDINATING/MANAGING ENTITY AND RESPONSIBLE PERSON(S)/ ENTITY(IES)

CME and/or responsible person/ entity	<input checked="" type="checkbox"/> CME <input type="checkbox"/> Responsible person/ entity for application of the selected methodology(ies) and, where applicable, the selected standardized baseline(s) to the PoA
Organization	Alternative Energy Promotion Centre (AEPC)
Street/P.O. Box	Mid Baneshwor, Kathmandu
Building	-
City	Kathmandu
State/Region	Bagmati
Postcode	-
Country	Nepal
Telephone	+977-1-4598013
E-mail	nawa.dhakal@aepec.gov.np
Website	www.aepec.gov.np
Contact person	Nawa Raj Dhakal
Title	Executive Director
Salutation	Mr.
Last name	Dhakal
Middle name	Raj
First Name	Nawa

APPENDIX 2 - DESIGN CHANGES

A2.1. Details of proposed or actual design change

>> NA

A2.2. Describe the Impacts of design change on the following

a. Additionality

>>NA

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

>>NA

c. Compliance with the monitoring plan of the applied methodology

>>NA

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

>>NA

e. Scale of the project activity

>>NA

f. Stakeholder consultation

>>NA

g. Sustainable development criteria

>>NA

h. Safeguarding assessment

>>NA

i. Compliance with applicable legislation

>>NA

Revision History

Version	Date	Remarks
2.2	14 April 2023	Integrated the design change memo as annex of the document. Editorial changes
2.1	31 May 2022	Editorial changes and revisions
2.0	04 May 2022	Key Project Information table revised to cater for the following information: <ul style="list-style-type: none"> - Scale of PoA - Title and GS ID of all real case VPAs included in the PoA A new Management System section included Safeguarding Principles Assessment section removed Outcome of PoA Level Stakeholder Consultation section revised in the following manner: <ul style="list-style-type: none"> - Justification for Stakeholder Consultation at PoA Level Only section removed A new Consideration of Stakeholder Comments Received section added
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Clarification on POA level LSC and Safeguard Principles Assessment Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption