



## Key Project Information

### Nepal Biogas Support Program – CPA 9: 17,304 digesters

#### Nepal Biogas Support Programme-PoA (GS 3110, UNFCCC Ref No 9572)

#### 1. Description of CPA

The Nepal Biogas Support Programme-PoA is registered with the UNFCCC CDM executive board on 31/01/2013. This is a nation-wide programme for the dissemination of household biogas digesters, managed by Alternative Energy Promotion Center (AEPC). Additionally, the PoA has retroactive registration under the Gold Standard including its first four CPAs, which implies a particular focus on sustainable development benefits.

This Component Project Activity (CPA) is part of the Nepal Biogas Support Program-Programme of Activity (PoA) and being included in this PoA. This CPA includes 17,304 digesters which were implemented between 09/04/2016 and 12/07/2018. Table 1 provides an overview of the digesters according to their size and location.

**Table 1: Digesters listed in this CPA.**

Size	Hill	Terai	Mountain or Remote Hill	Total
2 m <sup>3</sup>	3	3	0	6
4 m <sup>3</sup>	988	110	13	1111
6 m <sup>3</sup>	7638	7713	567	15918
8 m <sup>3</sup>	99	155	5	259
10 m <sup>3</sup>	2	8	0	10
<b>Total</b>	<b>8730</b>	<b>7989</b>	<b>585</b>	<b>17304</b>

This CPA is implemented within the geographical boundary of Nepal. The type of the digesters included received the subsidies as governed by the subsidy policy and subsidy delivery mechanism of the Government of Nepal.

Large number of Nepalese households depends on firewood to fulfill their basic energy requirements related to cooking. Continuous extraction of firewood leads to deforestation and ultimately interferes with the firewood availability in future. This is the reason that 86% of the firewood used for cooking in Nepal comes from the non-renewable sources. Implementation and use of biogas digesters therefore substitutes the non-renewable biomass from the baseline. Digesters generate biogas from cow manure; the gas can be used for cooking just as LPG. On weighted average basis, each biogas digester can save around 3.33 tons of firewood from each household which prevents around of 3 tons of carbon-dioxide equivalent attributable to the non-renewable biomass to be emitted in the atmosphere. This reduction

of emission can be traded to earn revenue which helps in propagating the digester implementation further.

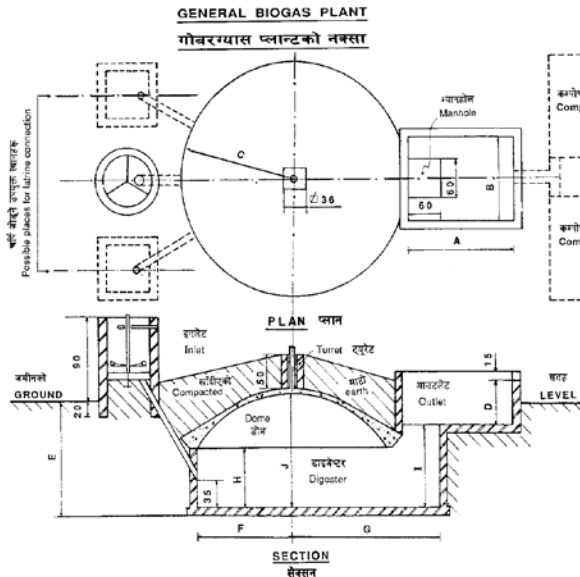


Fig: Plan and Section View of Biogas Plant



Fig: Biogas Digester in Operation

## 2. Responsible Parties

### Alternative Energy Promotion Centre

Alternative Energy Promotion Centre (AEPC) is Coordinating and Managing Entity (CME) and CPA implementer for this PoA. AEPC is a government institution to promote renewable energy in Nepal. AEPC provides subsidies to install the biogas plants in households and the biogas plants owners transfer the right on potential emission reduction/emission reduction generated to AEPC.

### atmosfair gGmbH

atmosfair is a German not-for-profit company providing voluntary offsets for greenhouse gas emissions e.g. from air travel by CDM Gold Standard projects. AEPC & atmosfair has the contractual agreement for the retroactive registration of the PoA and its seven CPAs at the moment. atmosfair has been supporting AEPC in retroactive inclusion of CPAs under the Gold Standard as a project participant.

## 3. Social, economic and environmental benefits and impacts

The PoA contributes towards the sustainable development on following aspects:

- i. Environmental Benefits:
  - a. Prevents deforestation and forest soil degradation caused by the harvest of firewood.
  - b. Prevents the emission of Greenhouse Gases from non-renewable biomass and that attributable to the anaerobic decomposition of the cattle dung that would have been left over for decay.



- c. The byproduct of the digestion process, bio-slurry, can be used as fertilizer which maintains the soil quality and avoids the possible soil pollution due to use of synthetic fertilizers.
- d. Improves indoor air quality by avoiding the smoky kitchen environment due to firewood use.
- ii. Social Benefits:
  - a. Reduces the drudgery in women caused due to tasks related to firewood collection and utensil cleaning and thereby saves time.
  - b. Improves sanitation by triggering the toilet construction at household level as the toilet can also be used as feeding material for the biogas digesters.
  - c. Improves the technical skills of the masons and other construction workers working in the sector.
- iii. Economic Benefits:
  - a. The use of the bio-digesters at households makes the households self-reliant on the energy for cooking and thereby saves the investment for energy sources in long run.
  - b. The jobs created by the sector help in the increased economic activity locally and nationally.
  - c. The bio-slurry produced from the digestion process saves the investment required to source synthetic fertilizers.

This demonstrates that the CPA contributes positively towards sustainable development.

**For more detail information and feedback:**

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