Programme of Activities CDM
Alternative Energy Promotion Centre, Nepal

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Introduction of AEPC

- Established in 1996 as **National Executing Agency for Renewable energy programmes and projects**
- For improving people’s livelihoods and protecting environment through RET promotion
- **Mandate:** policy and plan formulation, resource mobilisation, technical support, M & E, quality assurance and coordination in promotion of RETs.
AEPC APPROACH FOR PROGRAM IMPLEMENTATION

Demand side
- Public sector
- Capacity building
- Technical & financial assistance
- Coordination
- Quality assurance

Public Private Partnership

Supply side
- Private sector
- Manufacturing
- Supply & installation
- After sales services
- Internal quality control

Procedures/ Guidelines
Subsidy

Users/ Beneficiary
## CDM PoA/Projects Managed by AEPC

<table>
<thead>
<tr>
<th>SN</th>
<th>Project Name</th>
<th>No. of System bundled</th>
<th>Status</th>
<th>Annual Expected CER</th>
<th>CER Buyer/Trustee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Biogas Activity 1</td>
<td>9,692</td>
<td>Registered</td>
<td>26,926</td>
<td>World Bank</td>
</tr>
<tr>
<td>2</td>
<td>Biogas Activity 2</td>
<td>9,688</td>
<td>Registered</td>
<td>24,992</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Biogas Activity 3</td>
<td>20,254</td>
<td>Registered</td>
<td>56,919</td>
<td></td>
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<tr>
<td>4</td>
<td>Biogas Activity 4</td>
<td>20,348</td>
<td>Registered</td>
<td>56,487</td>
<td></td>
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<tr>
<td>5</td>
<td>Micro-hydro Promotion</td>
<td>450</td>
<td>Registered</td>
<td>40,535</td>
<td>World Bank</td>
</tr>
<tr>
<td>6</td>
<td>Biogas PoA</td>
<td>Annual 20,000 (till now 160,000 plants are included)</td>
<td>Registered</td>
<td>Around 3 per biogas per year</td>
<td>Atmosphair, Germany (Transfer by KfW)</td>
</tr>
<tr>
<td>7</td>
<td>ICS Program of Activities PoA</td>
<td>Per CPA 22,000 &amp; annual 4-5 CPAs</td>
<td>Requested for registration</td>
<td>Around 1.5 per ICS per year</td>
<td>FCF-ADB (negotiation ongoing)</td>
</tr>
<tr>
<td>8</td>
<td>IWM PoA</td>
<td>Annual 1200</td>
<td>Requested for registration</td>
<td>25000</td>
<td>FCF-ADB</td>
</tr>
</tbody>
</table>
IWM PoA

- CME & implemented by AEPC
- Initiated in 2010, yet to be registered
- Technically supported by ADB
- Double validation
- Incomplete submission for registration
- Requesting registration
- 1 CPA in two years
- CER buyer/Trustee: ADB-FCF
The Baseline

- Diesel mills that would be used in the baseline to cater the increasing processing needs.
- Statistics depict the increased proliferation of the diesel mills in recent past.
- Statistics shows 19,000+ TWMs exist in Nepal i.e. in absence of the PoA there is equal chance of diesel mill invasion.
The Project Scenario

- Traditional water mills is displaced by IWM. Alternately an IWM is installed by new user who might possibly have been the diesel mill entrepreneur.
- Avoidance of the diesel and diesel induced emission attributable to diesel mills.
Traditional Water Mill
For grain grinding only

- Not efficient:
- Available power 0.5 kW
- Processing capacity: 10-20 kg/hour

Improved Water Mill
For grain grinding and other end-uses
Efficient
Available power: 1-3 kW
Processing capacity: 20-50 kg/hour

Increase in Efficiency & Service diversification

Short Shaft
Only for efficient grain grinding

Long Shaft
Opportunities for grinding and various end-uses like: paddy hulling, oil expelling, saw milling, electricity generation etc.
Implementation Structure

NRREP

AEPC

Central Development Agencies

IWM NCB

District Development Partners

IWM District Units

RSCs

Service Centres
  Kit Manufacturers
  IWM/E Installer

IWM Owners’ Association/Federation

Owners Group

IWM Owner

Customers (rural communities/families)
Sustainable Development Benefits: Eligible for Gold Standard

- **Environmental Well Being**
  - Project produces real and measurable reductions in GHG emissions
  - Avoid local pollution from diesel mills in communities
  - Reduce dependency on fossil fuels

- **Technological Well Being**
  - Increase access to basic energy services to rural people
  - Program promotes sustainable energy efficient technology

- **Economic Well Being**
  - Diversified agro-processing services will be available for rural households from this project.
  - Development of local entrepreneurship
  - Program acts as a cost effective solution to address the country’s energy crisis

- **Social Well Being**
  - Faster milling and less waiting time with more efficient mills.
  - Reduction of workload (mainly for women and children) from mechanized milling of paddy and pressing oil thus avoiding drudgery related to manual milling
Improved Cooking Stove (ICS) PoA

- CME & implemented by AEPC
- Initiated in 2010, yet to be registered
- Technically supported by ADB
- Double validation
- Incomplete submission for registration
- Requesting registration
- Annual around 4 CPAs
- CER buyer/Trustee: ADB-FCF (Negotiating Ongoing)
Baseline Scenario

- The existing traditional stoves used in Nepal are simple structures made from clay or having stone or metal tripods.
- These stoves are very inefficient because they have poor air flow and insulation.
Project Scenario

• The proposed PoA will introduce activities that improve efficiency over the existing traditional cook stoves which will save non-renewable biomass in the baseline scenario

• The metallic ICS for the high hill region for both cooking & space heating
Sustainable Development Benefits: Eligible for Gold Standard

Environmental Well Being
- Natural recovery of forests and/or reforestation through reduction in the wood consumption,
- Reduction in Indoor Air Pollution from wood smoke and avoid smoke related health disorders
- Protection of standing forests will ensure the maintenance of
- Prevention of fire hazards in the household kitchen

Technological Well Being
- Introduction of locally manufactured technology with improved energy efficiency helps in technological self-reliance in the area

Economic Well Being
- The fabrication, operation and repair and maintenance of ICS’s generate employment to the local people
- The costs incurred in the purchase of firewood will be reduced through increased efficiency of the ICS thus leading to lesser firewood consumption

Social Well Being
- Preservation of wood resources avoid inter-communal and/or inter-religious conflict over resources.
- Reduce workload as a result of reduced in time for collecting the firewood
- Effectively address gender issues through increased economic activities and employment opportunities
Biogas PoA

- CME & implemented by AEPC
- Initiated in 2008, yet to be registered
- Technically supported by KfW
- Registered in January 2013
- 5 CPA included so far
- Annual at least 1 CPA inclusion
- CER buyer: Atmosfair
Baseline Scenario

• The existing traditional stoves used in Nepal are simple structures made from clay or having stone or metal tripods.
• These stoves are very inefficient because they have poor air flow and insulation.
Project Scenario

- Target group are households with at least one head of cattle (generally cows or buffalos) who currently use non-renewable biomass (firewood) for cooking purpose.
- Biogas is used as a fuel for cooking, therefore the displacement of NRB and GHG emission reduction.
Partners for Biogas dissemination

- AEPC
- NBPA
- BSP-N
- MFIs
- DDC/DEES
- Other Dev. Partners
- Networks/local organisations
Sustainable Development Benefits: Eligible for Gold Standard

Environmental Well Being
- Natural recovery of forests and/or reforestation through reduction in the wood consumption,
- Reduction in Indoor Air Pollution & avoid smoke related health disorders
- Prevention of fire hazards in the household kitchen
- GHG Emission Reduction

Technological Well Being
- Introduction of locally manufactured technology with improved energy efficiency helps in technological self-reliance in the area

☐ Economic Well Being
- The fabrication, operation and repair and maintenance of biogas generate employment
- The costs incurred in the purchase of firewood will be reduced
- Utilization of saved time in economic activities

☐ Social Well Being
- Preservation of wood resources avoid inter-communal and/or inter-religious conflict over resources.
- Reduce workload as a result of reduced in time for collecting the firewood
- Effectively address gender issues by utilizing saved time in economic and social activities
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