



Government of Nepal  
Ministry of Environment, Science and Technology  
Alternative Energy Promotion Development Board

## Alternative Energy Promotion Centre



### *An Introduction*



## 1. Background

Nepal has very high potential to exploit the renewable energy resources. However, the potential has not been exploited to the fullest. The energy sector of Nepal is characterised by a very heavy reliance on traditional resources that contribute to more than 85 percent of the total energy consumption. The use of Renewable Energy Technologies (RETs) can reduce the dependency on traditional sources of energy, and help to protect the environment by reducing the emission of greenhouse gases which in turn can contribute to sustainable development, regional balance and economic activities. It ultimately contributes to the improvement in the health and education of the population as well.

The positive impact of RETs for the fulfilment of energy needs of rural people was recognised by the Government as early as 1980's in the Seventh Five Year Plan. Since then, the promotion of RETs has gained momentum after being integrated into development plans and programmes.

Alternative Energy Promotion Centre (AEPC) was established on November 3, 1996 by the Government of Nepal with the objective of developing and promoting renewable/alternative energy technologies in the country. Currently, AEPC is under the Ministry of Environment, Science and Technology. It is working as a national focal agency for alternative/renewable energy in Nepal.

Nepal has diversified structure of land from plain to high Himalayas. The settlement pattern is scattered and sparse. Electricity from the national grid is not feasible in some of the places and it is too expensive as well. Big projects need a huge investment which can be the economic burden for the country like Nepal. The high potentiality of the renewable energy resources available in the country is the most appropriate option to electrify these remote areas. It also helps to reduce the dependency on the traditional biomass energy resources and fossil fuels and to manage the energy crisis of the nation. This ultimately helps to minimize the degradation of the environment.

## Estimated Potential of RE Resources in Nepal

Nepal has enormous potential for renewable energy resources. This can be seen from the table below:

S.N.	Technologies	Estimated Potential	
1	Mini/micro Hydro	>100 MW	Possible in 55 mid and high Himalayan districts of Nepal
2	Domestic Biogas	1.1 Million plants	At existing livestock population
3	Solar Energy	2,100 MW (grid connected)	4.5 kWh/m <sup>2</sup> /day radiation if 2% area is taken as suitable
4	Improved Cooking Stove	>2.5 Million	Considering 75% eligible households as of the total households of 2001 census
5	Improved Water Mill	~25,000 -30,000	
6	Wind	3,000 MW	Considering 10% of area with more than 300 m <sup>2</sup> WPD
7	Bio-fuel	1.1 Million ton	

## 2. Mandate, Vision, Mission and Objective of AEPC

The mandate, vision, mission and objectives of AEPC are as follows:

### Mandate

The mandate of AEPC includes the promotion of mini/micro hydro power up to 10 MW, solar energy, wind energy, biomass energy, biogenetic gas, sulphur spring including biogas etc.

## Vision

"An institution recognized as a regional/international example of promoting a large-scale use of renewable energy sustainable and a national focal point for resource mobilization".

## Mission

"To make renewable energy the mainstream resource through increased access, knowledge and adaptability contributing to the improved living conditions of people in Nepal".

## Objectives

- To develop and promote the use of RETs and energy efficiency to raise the living standard of the rural people,
- To reduce negative impacts on the environment resulted from the use of traditional sources of energy, and
- To develop commercially viable alternative/renewable energy industries in the country.

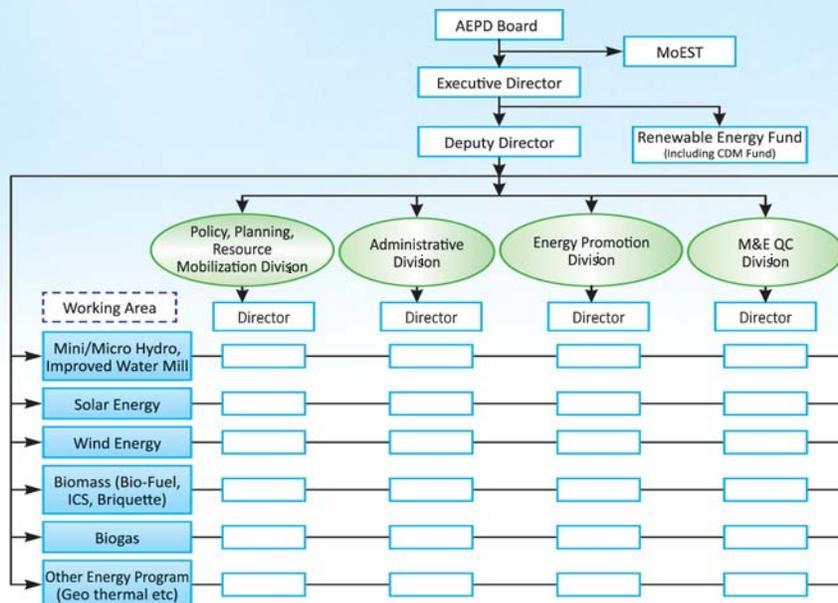
## 3. Board Structure

Established under the Development Broad Act 2013 BS, AEPC is a semi-autonomous government institution governed by the Alternative Energy Promotion Development Broad (AEPDB) and chaired by the Minister of Environment, Science and Technology with other members representing public and private sectors, non-governmental organisations, and financial institutions.

The composition of the board is as follows:

Minister, Ministry of Environment, Science and Technology	Chairperson
State Minister, Ministry of Environment, Science and Technology	Co-Chairperson
Member, National Planning Commission (Looking after Energy Sector)	Vice Chairperson
Secretary, Ministry of Environment, Science and Technology	Member
Representative (Gaz. 1st Class Officer), Ministry of Energy	Member
Representative (Gaz. 1st Class Officer), Ministry of Finance	Member
Representative (Gaz. 1st Class Officer), Ministry of Local Development	Member
One Representative from among the Financial Institutions, Micro Finance	Member
One Representative from among INGO/NGO working in the RETs	Member
One Representative from among Companies working in MHP, Solar Energy, Biogas Sectors (Organisations/Private Sector)	Member
Executive Director, AEPC	Member-Secretary

## 4. Organisational Structure



Organisational Structure of AEPC

AEPC has four different divisions, namely policy, planning and resource mobilization division; administrative division; energy promotion division, and monitoring, evaluation and quality control division. These divisions are headed by the directors and all the RET components are promoted by the centre.

## 5. Role and Responsibility

Acting as an intermediary institution between the operational level i.e. NGOs/private promoters of renewable energy and the policy decision levels in relevant ministries, AEPC's activities include renewable energy policy formulation, planning and facilitating the implementation of the policies/plans, standardization, quality control and monitoring.

### **The main roles and responsibilities of AEPC are:**

- To formulate appropriate policies and programmes for the development and expansion of RETs,
- To standardize the quality assurance and monitoring of RETs,
- To coordinate with local level for the effective implementation of different programmes supported by the Government of Nepal, foreign governments and other international partners,
- To establish and promote the network of RETs, including national and international partners to share the knowledge and information,
- To collect and analyze the information and statistics related to RETs, to formulate pilot projects on RETs and implement them, and to publish books, reports and articles for the promotion of RETs,
- To expand the use of RETs and involve the private sector in the development of RE programmes by creating an appropriate environment for banks and financial institutions for credit facility, and to help to make the Government subsidy effective,
- To provide consultation services to the stakeholders regarding the development, promotion and implementation of RETs,
- To work as a national focal agency of alternative and renewable energy,

- To prepare and approve the annual budget and programmes of the board,
- To receive necessary credit, subsidy and support from the Government of Nepal, foreign governments, national and international organisations,
- To provide credit facilities to promote RETs,
- To organize national and international skill-based trainings and seminars related to RETs,
- To analyze the direct and indirect achievements,
- To evaluate and monitor the functions of the board,
- To work for achieving the goal of the board.

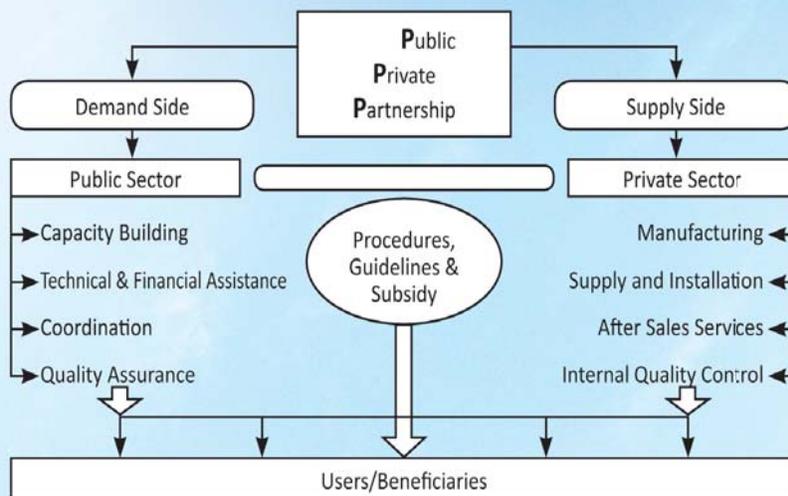
## 6. Working/Implementation Modality

AEPC works in collaboration with the various partners such as ministries and their departments, non-governmental organisations, private sectors, civil society and communities/users groups for the development and promotion of RETs in the country.

AEPC follows the Public Private Partnership Model and Demand-Based Approach. The public sector works for capacity building, technical and financial assistance, and coordination, quality assurance and so on while the private sector works for manufacturing, supply and installation, and after-sales services.

The capacity development of local government bodies has been emphasised by operationalising District and Environment Unit/Section (DEEU/S) in all the 75 districts of the country for demand collection, implementation, monitoring and supervision of RETs and programmes. Besides, the programmes have regional and district level partners working as outreach for collecting demands, implementation and monitoring. Pre-qualified (PQ) companies are involved in manufacturing, supply, installation and after-sales services. There are separate PQ companies for different RETs and the subsidy is channelled only through such companies.

The overall programme implementation modality can be presented in the following way:



## 7. RE Technologies We Promote

AEPC has the mandate to develop and promote all RETs viable/feasible in the country. The technologies currently being promoted include the following:

### Biogas

Biogas is the mixture of different gases produced by methanogenic bacteria feeding on bio-degradable materials in anaerobic (oxygen less) conditions. Biogas contains 50 to 70 percent methane and 30-40 percent carbon dioxide with other gases. Biogas is about 20 percent lighter than air. It is odourless, colourless and burns with a clear blue flame similar to that of LPG.



AEPC provides financial (subsidy) and technical supports to disseminate household size biogas plants with the capacity from 2 to 8 m<sup>3</sup> for the modified GGC 2047 model. Further, the Government has adopted the

policy for providing financial (subsidy) and technical supports for the institutional and community plants such as in schools, police and army barracks, hospitals etc. since 2011. Similarly, it has included a public private partnership model for the extended biogas use in commercial enterprises and waste management primarily in the semi-urban and urban areas such as for the poultry farms, slaughter houses, cow farms etc. The biogas technology is considered technically feasible up to a height of 21000 metres.

**AEPC is working in the following areas of biogas:**

- Development and promotion of the biogas technology for diversified applications based on waste generated and applications thermal (heat) and electricity,
- Quality assurance and control of the biogas plants promoted and installed with the support from the partner/s,
- Monitoring and evaluation of biogas plants in terms of the design, technology parameters and procedures/modalities of promotion,
- Facilitating the credit for the construction of the biogas plants,
- Encouraging a tie-up of the Biogas Credit Fund, also for the promotion of biogas use in commercial and productive applications waste to energy,
- Research and development, primarily adaptive ones, for the diversification of technology in terms of lowering the cost and suitability of the geographical and ecological conditions – temperature, climate, rainfall, etc.
- Providing the subsidy.

### **Mini / Micro Hydro**

Mini and Micro hydro is defined as the schemes that generate electric power from 100 kW to 1000 kW (1 MW) capacity. AEPC also works on supporting Pico-hydro (below 5 kW) and other projects more than 5kW, but less than 1000 kW at present. But the Government has expanded the AEPC mandate to develop and promote hydro power up to 10 MW.

**AEPC is working in the following areas of mini/micro hydro:**

- Promotion of mini and micro hydro,
- Detailed survey, design and feasibility study of mini and

- micro hydro power,
- Support to the establishment of micro/mini hydro power service centres,
  - Strengthening the capacity of private sectors for manufacturing, installation, survey, design and so on,
  - Support to R and D on mini/micro hydro,
  - Support to training and capacity building activities to all concerned stakeholders,
  - Support to conduct national, regional, international seminars and trainings for experience sharing,
  - Promotion of energy end use,
  - Providing the subsidy.



*Nauli Khola III (30 kW), Micro Hydro Project of Gorkha*

## Improved Water Mill

The Improved Water Mill (IWM) is a device used for grinding grain through kinetic energy produced by flowing water from a certain height to strike a runner. An improved water mill is the necessary improvement made in the traditional water mill by improving its capacity and having multiple benefits.



*Improved Water Mill grinding Maize*

In Nepal, there are around 25,000 to 30,000 traditional water mills operating with low efficiency for the purpose of grinding grain. When improved, these water mills called *Ghatta* can easily double the grinding efficiency.

### **AEPC is working in the following areas of Improved Water Mill:**

- Promotion of the IWM technology through the establishment of orientation and demonstration sites, documentaries, radio programmes, and production and distribution of various information brochures and leaflets,
- Organizing Water Mill Owners by supporting them to create Ghatta Owners Group (GOG) and Ghatta Owners Association (GOA),
- Streamlining the gender and social inclusion through IWM,
- Establishment of Quality Management System,
- Capacity building of local Service Providers,
- Collaborating with local bodies, line agencies and other livelihood programmes for better synergy,
- Follow-up and monitoring of installation and programmes activities,
- Providing the subsidy.

### **Solar Energy**

Solar energy is the power derived from the sun. Radiant light and heat from the sun can be harnessed by different solar technologies. Solar energy technologies include mainly Solar Photovoltaic and Solar Thermal. Put simply, if solar energy is converted into electricity by using solar cells or panels, it is called Solar PV applications whereas if solar energy is converted into heat rather than light, it is called solar thermal applications.



Solar Thermal and Solar Photovoltaic (PV) Systems are the two types of solar energy technologies used throughout the country. Solar Thermal applications include Solar Water Heaters, Solar Dryers and Solar Cookers. Similarly, Solar PV System applications include Solar Electrification



*Small Solar Home System*



*Institutional Solar System*



*Solar Cooker*



*Solar Dryer*

through Solar Home Systems (SHS), Small Solar Home Systems (SSHS) and Solar Street Lights, etc. Further, the Solar PV technology has been widely used for different applications like the operation of different electrical and electronic devices in schools, health posts and communication centres.

**AEPC is running the following activities in the areas of solar energy:**

- Supporting the Government for preparing policies, guidelines, standards related to the solar energy sector,
- Developing and promoting solar energy technologies, including solar thermal (Solar Dryer, Solar Cooker) and solar PV (the small solar home system, the solar home system, the institutional solar photovoltaic system, solar pumping, etc),
- Quality standardisation of different solar energy technologies,
- Mobilising funds and administering subsidies,
- Supporting private sectors and other relevant organisations to promote solar energy technologies,
- Conducting user surveys, monitoring and evaluation of solar energy activities,
- Supporting to conduct training for end users and service providers,
- Supporting to conduct seminars and conferences to promote solar energy in Nepal.

## Improved Cooking Stove

The Improved Cooking Stove (ICS) is a device designed to improve the combustion efficiency of biomass. It consumes less fuel, saves cooking time, makes cooking process more convenient and creates a smokeless indoor environment in the kitchen or reduces the volume of smoke produced during cooking against the traditional stove. Mud-brick ICS are also disseminated for intuitions as well as commercial sectors. AEPC promotes both mud-brick and metallic ICS.



*Mud-brick Improved Cooking Stove*

### **AEPC is working in the following areas of Improved Cooking Stove:**

- Promotion of the Improved Cooking Stove,
- Supporting R & D on mud and metallic cooking stoves,
- Supporting various types of training such as training on construction and installation, training for social mobilisation, training of trainer (ToT), training on the MIS database, training for Local Partner Organisers, training for new promoters, refresher training, training for RRESC staff, etc.,
- Preparation and dissemination of information, education and communication materials.

## **Other Biomass Energies**

### **Gasifiers**

The biomass gasifier is designed to improve combustion efficiency by converting the solid biomass into a gaseous state which is then burnt to produce a blue flame. AEPC has piloted this technology for agro product processing industries like tea processing, *masyoura* and *dalmots* industries, etc.

### **Bio-briquette**

Biomass briquetting is the process of densification of loose biomass, directly or after charring, to produce the compressed solid material of different shapes and sizes. The product of densification is called biomass briquette. Any type of combustible loose biomass such as agricultural residue,

forest waste and other solid wastes serve as raw materials for briquetting. Briquetting helps to improve fuel characteristics, combustion properties, application, handling, transportation and storage.



AEPC has been basically involved in capacity building, demonstration and awareness activities for the promotion of biomass briquetting in Nepal.

## Wind Energy

Wind energy generation is the process by which the wind is used to generate mechanical power or electricity. If the mechanical energy is used directly by machinery such as pumping water or grinding grains, the machine is usually called a wind mill. If the mechanical energy is converted into electricity, the machine is called a wind generator.



*Wind mill*



*Wind Solar Hybrid System (Wind generators and Solar panels)*

### **AEPC is working in the following areas of wind energy:**

- Collection of wind speed data and development of wind mapping,
- Conducting R & D on the wind energy technology,
- Installation of wind turbines for wind power generation,
- Support for the demonstration of projects on the wind and wind solar hybrid system,

- Installation of wind pumping projects for modern irrigation,
- Conducting detailed wind feasibility study for mega projects in the public-private partnership model.

## Bio-fuel

The term *bio-fuel* refers to liquid or gaseous fuels produced from biomass. The bio-fuel is generally considered as offering many priorities, including sustainability, reduction of greenhouse gas emissions, regional development, social structure, agriculture and security of supply.



*Jatropha Curcas tree with seeds*

A variety of bio-fuels can be produced from biomass resources, including liquid fuels such as ethanol, methanol, biodiesel; and gaseous fuels such as hydrogen and methane. The liquid bio-fuel is primarily used to fuel vehicles, engines, or cells for electricity generation. It can also be used for lighting and cooking purposes by using lamps and cooking stoves.

Among the various types of bio-fuel, AEPC primarily focuses on the promotion of *Jatropha Curcas* for the production of bio-diesel in order to reduce dependency on imported fossil diesel to some extent.

## Other RETs

### Geothermal

AEPC is involved in the study and promotion of other forms of renewable technology like geothermal energy.

## 8. Major Programmes/Projects

### ■ Biogas Support Programme

Programme/Project Title	: Biogas Support Programme
Programme/Project Period	: Jan 2011 – July 2012 (Interim Phase)
Funding	: SNV, KfW and Government of Nepal
Supported Technologies	: Domestic Biogas

The biogas technology was introduced in Nepal in 1955 and the Government started a biogas programme in 1975. This programme took further momentum from 1992 following the establishment of the Biogas Support Programme (BSP) under the assistance of the Government of the Netherlands through the Netherlands Development Organisation (SNV) with the aim of promoting the use of biogas in rural households instead of direct burning of fuel wood, animal wastes and agricultural residues. Later, the Government of Germany through Kreditanstalt für Wiederaufbau (KfW) started funding from 1997 and the World Bank through the Global Partnership Output Based Aid (GPOBA) started funding from 2006.

So far, BSP has completed its four phases of implementation and currently it is in operation under an Interim Phase agreed till July 2012. AEPC is the executing agency and Biogas Sector Partnership-Nepal (BSP/N); Non-Governmental Organisation is the principal implementing agency, while the Nepal Biogas Promotion Association (NBPA), as an umbrella organisation of the biogas companies, also supports the implementation.

The interim phase of BSP has the target of installing 31,500 household size biogas plants, 50 community biogas plants and 75 institutional biogas plants. It succeeded in installing 20,592 household biogas plants from January 2011 to February 2012. The number of installed biogas plants since the establishment has reached 2, 42,561 by the end of 2011.

### ■ Energy Sector Assistance Programme

Programme/Project Title	: Energy Sector Assistance Programme
Programme/Project Period	: March 2007- July 2012 (Second Phase)
Funding	: DANIDA, NORAD, DFID, KfW and Government of Nepal
Supported Technologies	: Mini/Micro Hydro, Solar, Biomass

The Energy Sector Assistance Programme (ESAP) started with the support of DANIDA in 1999 with a view to achieving ongoing sustainability in the rural/renewable energy sector in Nepal within a 20 year time frame. Norway also started to support the programme since 2003. The first phase of the programme built a strong foundation for future action and provided benefits to around 1.5 million people in rural Nepal.

ESAPII (2007-2012) aims to provide energy solutions to more than 1 million households in Nepal. Currently, it has been funded by DANIDA, NORAD, DFID/UK, and KfW/Germany, including the Government of Nepal.

ESAP works through the Regional Renewable Energy Service Centres (RRESC) located in different parts of the country.

ESAP has five different components. They are Institutional Strengthening of Rural Energy Sector (ISRES), Rural Energy Fund (REF), Biomass Energy Component (BEC), Solar Energy Component (SEC) and Mini-Grid Rural Electrification Component (MGREC). The Improved Water Mill (IWM) programme has been integrated into MGREC. These components work for different RETs like mini/micro hydro, solar, biomass, including capacity building, managing funds for subsidy.

ESAP II aims to electrify 122,000 households from MHP (including IWM), 207,000 households from the solar home system and 100,000 households from the small solar home system. Similarly, developing 1,250 IWMs, constructing 305,000 mud ICS and 17,000 metallic ICS and installing 100 systems of solar PV drinking water schemes are other targets of the project. So far, ESAP has supported in installing 302,000 ICS, 671 institutional ICS and 6,075 metallic ICS, 207,000 solar home systems and 16,500 small solar home systems, and has electrified 51,000 households from Micro Hydro Projects.

#### ■ **Renewable Energy for Rural Livelihood**

Programme/Project Title	: Renewable Energy for Rural Livelihood
Programme/Project Period	: April 2011 to December 2012
Funding	: UNDP, World Bank and Government of Nepal
Supported Technologies	: Community Micro Hydro

Renewable Energy for Rural Livelihood (RERL) is in implementation since 1 April 2011. It is a joint programme of the Government of Nepal, the United Nations Development Programme (UNDP) and the World Bank (WB). RERL was initiated upon the successful completion of the Rural Energy Development Programme (REDP) with the main focus on enhancing rural livelihood.

One of the intended outputs of RERL is to use the lessons and best practices of REDP to design a new model linking renewable energy to livelihood promotion and poverty alleviation in Nepal. Currently, it is being implemented in 31 districts of Nepal.

The programme works with the community groups at local level. They are also implemented at district level through District Energy and Environment Sections of all programme districts.

The programme has targeted at 15000 additional households to connect energy services with the generation of 1.5 MW power output in the programme districts, to complete the community-managed rural electrification pilot projects, to establish additional 50 energy-based enterprises in 20 districts, to establish networking between energy companies, RE system distributors and Micro Finance Institutes for smooth operation of the systems, and to conduct study on the impacts of end use promotion in terms of their livelihood enhancement throughout the programme period.

There are two major projects implemented by RERL: Micro Hydro Village Electrification Programme and Enhanced Rural Energy Services – Kabeli Transmission Project. Under the micro hydro project, the programme is developing micro hydro projects and promoting productive end use for income generating activities of electricity that can enhance the livelihood of rural people.

In Enhanced Rural Energy Services – Kabeli Transmission Project– focuses on the community-driven implementation and management approach, conservation of the environment, community mobilisation, productive end use development and income generation activities. This project has been designed for the expansion of energy services to village communities in the Kabeli Transmission corridor (Panchthar and Ilam districts). Community owned mini/micro hydro projects, solar energy systems, including institutional PV for schools and health posts and toilet-connected biogas plants will be developed within the project period (30<sup>th</sup> June, 2015).

#### ■ **Renewable Energy Project**

Programme/Project Title	: Renewable Energy Project
Programme/Project Period	: 2004- September 2012
Funding	: EU and Government of Nepal
Supported Technologies	: Institutional Solar PV and Solar Thermal

Introduced in 2004, the Renewable Energy Project (REP) is a joint effort of the European Union (EU) and the Government of Nepal to create the renewable energy infrastructure and service for the benefits of people in remote districts of Nepal.

REP is building the energy infrastructure in rural areas of Nepal through the set-up of village energy cooperatives and provision of institutional photovoltaic systems as energy generators for schools, health posts, community communication centres, water pumping, community entertainment, community literacy and milling in its programme area; around 300 VDCs in 21 hilly and mountainous districts of Nepal.

REP has targeted at installing 933 community-owned institutional solar photovoltaic systems equivalent to 1.023 MWp of electricity; 14 solar hot water systems and 24 solar dryers. As of present it has established solar energy service provisions for 378 schools, 206 health posts, 29 computer literacy classes, 59 community entertainment centres and 124 community telecom centres. Similarly, the installation of 107 agro-grind milling systems, 30 solar water pumping systems, 14 solar hot water systems and 24 solar dryers are the other achievements of the project.

#### ■ **Climate and Carbon Programme**

Programme/Project Title	: Climate and Carbon Programme
Programme/Project Period	: Since July 2010
Funding	: SNV/DGIS, DFID/UK and Government of Nepal
Supported Technologies	: All

The Climate and Carbon Unit (CCU) was envisioned in the Third-Year Approach Paper and established in July 2010 in AEPC in order to better address climate change issues. The UK Department for International Development (DFID), SNV Nepal and the Government of Nepal, have provided financial support and technical support respectively to establish and operate the unit.

The objective of CCU is to develop AEPC as a knowledge centre of climate change mitigation and adaptation as well. Other objectives of CCU are to establish institutional linkage of climate change activities of AEPC with the Climate Change Management Division of Ministry of Environment, Science and Technology to further leverage carbon mitigation and climate change adaptation potential of existing and future AEPC programmes/technologies, to

institutionalise and mainstream carbon financing in the RET sector. It supports the Government in formulating the climate change-sensitive RE policy and plan, developing a guideline for Local Level Climate Change Initiatives. It also supports District Development Committees in preparing climate and gender-sensitive energy plans and implementing them.

CCU is working on development and management of RETs carbon projects possible in the country. It has succeeded in registering five Clean Development Mechanism (CDM) Projects; four biogas projects consisting about 60 thousands biogas plants, and one micro hydro project with total 448 mini/micro hydro projects.

CCU has developed the District Climate and Energy Plans Preparation Guidelines, and District Climate and Energy Plans (DCEPs) for three pilot districts, namely Ilam, Makawanpur and Mustang. Capacity building of DDC-DEEU/S to coordinate climate change activities at local level, and ensuring coordination and cooperation between AEPC and the wider climate change sector are the other activities conducted by the programme.

#### ■ National Bio-fuel Programme

Programme/Project Title	: National Bio-fuel Programme
Programme/Project Period	: Since 2009
Funding	: Government of Nepal
Supported Technologies	:

The Government of Nepal has been implementing the National Bio-fuel Programme (NBP) since the fiscal year 2008/09 under AEPC by focusing particularly on the promotion of *Jatropha Curcas* for the production of biodiesel in the country. AEPC has been working on research, field testing, and establishment of nursery and conduction of awareness activities on *Jatropha Curcas* in various locations of the country.

It has been decided to have a single program modality in renewable energy sector which is named as '**National Rural and Renewable Energy Programme**' (NRREP) and will be commenced in July, 2012. It will be a single programme modality in which there will no other programmes or projects funded outside the NRREP.

## 9. Other Activities

### Gender and Social Inclusion

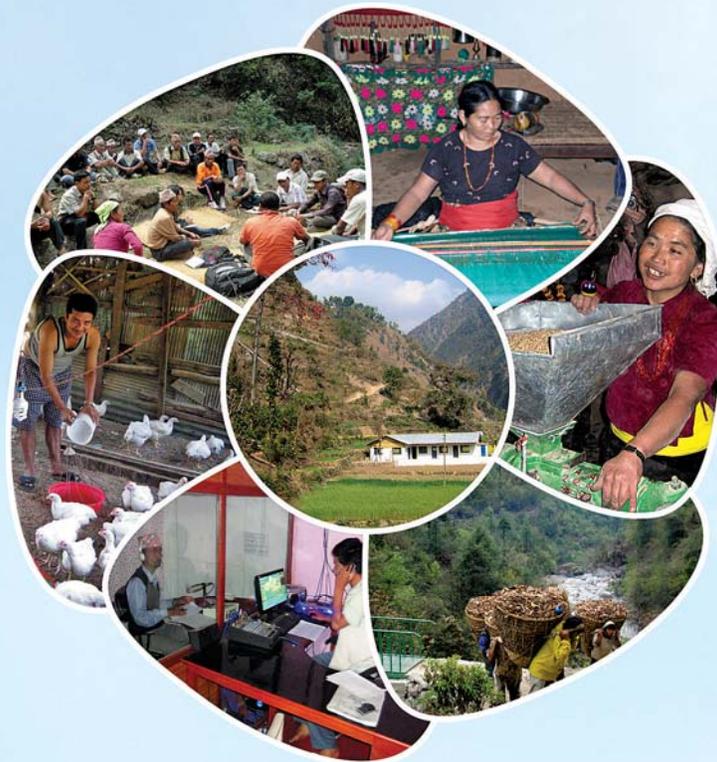
The RET intervention supports in reducing women's drudgery and empower them through improved working conditions. Moreover, the promotion of technologies such as micro-hydro is mostly carried out through community mobilisation that ensures the participation of women and socially excluded community members at all the stages of project planning, implementation and evaluation. The restructuring and empowering of AEPC, as a nodal agency in the RE sector, is believed to mainstream gender and social inclusion in this sector and sensitisation of gender and social inclusion issues among energy institutions.

### Promotion of Productive End Use of RE

The productive end use is crucial to reduce poverty through the establishment of small and medium scale enterprises at local level creating employment through income generating activities. It also improves the life of people through house applications. So, AEPC is also promoting productive end use of renewable energy.

#### *Various end uses of renewable energy*





---

## Alternative Energy Promotion Centre

Khumaltar, Lalitpur, Nepal

Post Box No. 14364, Kathmandu

Phone: 00977-1-5539390/5539391/5539237/5550183/5550184

Fax: 00977-1-5542397

Website: [www.aepc.gov.np](http://www.aepc.gov.np)

Email: [info@aepc.gov.np](mailto:info@aepc.gov.np)

---