Government of Nepal
Ministry of Environment
Alternative Energy Promotion Centre

Subsidy Policy for

Renewable (Rural) Energy

2009 (2066 BS)

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Subsidy for Renewable (Rural) Energy, 2009

1. Background

The exploitation of various sources of renewable (rural) energy like: biogas, small and micro hydropower, solar energy, improved water mill, improved cook stove, wind energy, etc. has great potentiality in Nepal. Government of Nepal (GoN) has established Alternative Energy Promotion Centre (AEPC) for the objective of environment conservation and sustainable development of rural areas by promoting different sources of renewable energy resources and technologies. Considering the fact that the maximum utilization of these renewable energy resources contribute to environmental protection and sustainable rural development, GoN has been providing subsidy to deliver renewable energy services in rural areas. It is felt necessary to make adjustment in the existing subsidy policy to increase development impact in terms of increased service delivery efficiency and increased access to rural poor and socially disadvantaged people.

Considering these facts to make the Subsidy Arrangement, 2008 equitable, inclusive and effective, this Renewable (Rural) Energy Subsidy Arrangement, 2009 has been formulated.

2. Objectives

2.1 To maximize the service delivery and service delivery efficiency in the use of renewable energy resources and technologies in the rural areas and to provide opportunity to low-income rural households to use RETs.

2.2 To support rural electrification as well as gradually reduce the growing gap of electricity supply, consumption, etc. between rural and urban areas.

2.3 To make the use of grant assistance provided by donors, existing and forth-coming, in a more effective and objective oriented way and thereby attract additional donors and other investor in RETs sector.

2.4 To support development and extension of RET market by attracting private sector entrepreneurs.

2.5 To support to the envisaged long-term targets of GON in providing rural electrification and energy services.

3. Policy Statement, Subsidy Type and Level

3.1 Micro Hydro Power (MHP)

Apart from revision in the subsidy rate warranted due to increased cost of micro hydro (MH) installation, the new subsidy for micro hydro will be provided based on number of households to be served by MH. This will ensure indirectly that all households in the communities are served by MH, thereby making the policy inclusive. The subsidy for MHP projects/schemes is as follows:

3.1.1 A subsidy amount of NPR 12,000 per household will be provided for new MHP project up to 5 kW capacities. But the subsidy will not be more than NPR 97,500 per kW generated.

3.1.2 A subsidy amount of NPR 6,000 per household will be provided for to the add-on MHP project (Improved Water Mill) up to 5kW capacity, if it is for electrifying villages. But the subsidy will not be more than NPR 60,000 per kW generated

3.1.3 A subsidy amount of NPR 15,000 per household will be provided for new MHP project above 5 kW and up to 500 kW. But the subsidy will not be more than NPR 125,000 per kW generated.

3.1.4 With respect to rehabilitation of MHP project of more than 5 kW capacities, a subsidy of 50% of the installation cost will be provided. But the subsidy will not be more than NPR 62,500 per kW generated.

3.1.5 Provision of subsidy has been made for the MHP to be installed for institutional and community use. Subsidy of NPR 97,500 will be provided to plants up to 5kW capacity that are used for supplying electricity to temples, religious locations, community radio facilities and hospitals. Subsidy for transportation of equipment and materials of such MHP will be as specified in 3.1.6 below.

3.1.6 An additional subsidy will also be provided for the transportation of equipment and materials of the MHP project. The transportation subsidy of NPR 500 per kilometer per kW will be provided based on distance travelled by porter from the nearest road head to MHP project site located at more than 10 kilometers from road head. But this will not exceed NPR 30,000 per kW capacity generated. Projects located in Karnali Zone and the specified adjoining areas* will get transportation

subsidy of NPR 30,000 per kW. However, for all the projects getting transportation subsidy, the subsidy amount will be calculated as 1 kW per 8 households maximum. Rehabilitation projects will get 50 percent of above transport subsidy.

3.1.7 There should be a written agreement with AEPC, if other organizations, except local agencies are willing to invest or support the MHP.

3.1.8 Additional financial support will be provided for the productive use of energy. Based on the business plan, NPR 10,000 per kW but not exceeding NPR 250,000 per project will be provided. However, MHP should be in operation for more than 6 months for eligibility for this subsidy amount.

* Humla, Jumla, Kalikot, Dolpa, Mugu, Rolpa, Rukum, Jajarkot, Bajhang, Bajura, Achham, Dailekh, Darchula

3.2 Solar Energy System

The following subsidy will be provided for Solar Home System, Small Solar Home System, Institutional Solar Home System, Solar cooker, Solar Dryer and Solar water pump to make the policy more pro poor and inclusive.

3.2.1 Solar Home System (SHS)

1. Subsidy will be provided to households for installing SHS of 10-18 Wp, and more than 18 Wp from now onward as mentioned in following areas.

Geographical region	10-18 Wp (NPR)	More than 18 Wp (NPR)
Karnali and adjoining districts* and very remote VDCs# categorized A in other districts	7,000	10,000
Remote VDC# categorized B in other districts	6,000	8,000
Accessible VDCs	5,000	6,000

* Humla, Jumla, Kalikot, Dolpa, Mugu, Rolpa, Rukum, Jajarkot, Bajhang, Bajura, Achham, Dailekh, Darchula

\# The very remote and remote VDCs of the remote districts are as per Ministry of Local Development (MoLD)/GoN notification in the Nepal Gazette. The category “A” comprises of very remote VDCs, while category “B” represents remote VDCs as specified in Annex-1.

2. In order to provide quick relief from kerosene tuki and jharo etc. in the rural areas a

small solar system based on White LED will be promoted. A subsidy of NPR 2,000 per system will be provided to a SSHS consisting of at least 5Wp solar panel along with two sets of solar lamp.

3.2.2. Institutional Solar PV System

1. The subsidy for Solar PV systems used by public institutions such as for operating computers in remote schools, vaccine refrigerators in remote health posts, FM radio equipments in remote and remote tele-centers etc. will be up to 75% of the cost.

2. The subsidy amount of 75% not exceeding NPR15,000 will be provided for providing lighting to the monasteries, temples, churches, Mosque and other religious places in the remote without electrification by any other means.

3.2.3 Solar Water Pump

In order to encourage solar PV use in the areas where rural electrification has not been done, Solar Pumps will be useful for the activities like small irrigation and drinking water. If it is irrigated in the hill areas, it will not only increase the agriculture productivity, but also increase the income of the poor people. Therefore, to promote productive use of solar PV, the subsidy of solar pump up to the capacity of 1,500 Wp will be 75% of its cost but not exceeding NPR 1,000,000. AEPC will provide necessary technical support to such schemes.

3.2.4 Solar Cooker

Realizing the usefulness of solar cooker and recent price increases, the subsidy to solar cooker will be 50% of its cost, but not exceeding NPR 5,000.

3.2.5 Solar Dryer

The solar dryers may have extensive use in the rural areas, taking into account of its contribution to fuel wood saving and drying of agriculture products/food without quality deteriorations. Solar dryer might contribute to rural household income as well. So, the subsidy will also be provided to family sized solar dryers as well as the solar dryers, which could use in commercial purpose.

The subsidy to family sized solar dryer costing up to NPR 20,000 will be provided up to 50%. If the dryers are to be installed in rural areas for commercial purpose, the subsidy will be up to 70% of the total cost. Preference will be given to the dryers used for drying organic products.

3.3 Biogas

Among all the Renewable Energy Technologies, biogas has occupied an important role and in order to provide maximum benefit to rural households and to mitigate the environmental degradation and to meet the household energy requirements, the GON, and various donor countries have been providing the subsidy to biogas plants since 1992 (2049 B.S.).

Due to usefulness of biogas programme, high potential and benefits of the technology, the policy of subsidies to biogas plants will be continued even after the completion of the current programme by mobilizing new possible donors and investors. The current subsidy policy is applicable to only GGC 2047 Model or the revised model of same of capacity 4-8 cubic meter. Feasibility study and pilot projects of the community biogas plants will be undertaken to explore possibility of using solid waste and other vegetable waste feed stock in addition to cattle for biogas generation.

As per the objective of timely revision of the subsidy and increase the access of this technology to low income population, the subsidy for family biogas plants will be as follows:

a) The currently followed subsidy delivery process has been simple and internationally accredited (ISO 9001 – 2000), the procedure will be continued.

b) From FY 2008/2009, the subsidy rate will be adjusted based on either according to the monetary inflation rate of Nepal Rastra Bank or with the market analysis of construction materials and services related to biogas plant before the starting of New Year and then subsidy rate for the new FY will be determined. With reference to the quotation provided from the market, standard subsidy percentage (20% to 40% based on the plant size and the geographical percentage) will be determined.

S.N.	Geographical Distinction (Districts)	Subsidy rate
1	20 districts of Terai as specified by GoN in Annex 2(1)	NPR 9,000 per plant
2	40 hilly districts with road access as specified by GoN in Annex 2(2)	NPR 12,000 per plant

3	15 remote districts without road access as specified by GoN in Annex 2(3)	NPR 16,000 per plant
4	Low penetrated districts as specified in Annex 2(4) will be provided with additional subsidy of NPR 700 per plant	
5	To encourage small users, 2, 4 and 6 cubic Meter capacity plants will be provided with additional of NPR 700 per plant	

Note: If there is change in the category of remote and accessible districts, it will be as specified by Ministry of Local Development (MoLD).

Additional Subsidy for the "Poor, Dalit, Depressed, Conflict Affected"

From FY 2006/2007, fund of donor agencies has been given to the poor women member group of the rural development bank as an additional subsidy through recommendation of 5 regional rural development banks promoted by the government bodies for the installation of biogas plant having capacity of 2, 4 and 6 cubic meter

In addition to rural development bank, the subsidy will be provided with the recommendation of the other organizations that are providing the loan without collateral and which are following the working procedure of the rural development bank such as micro-finance companies and those who are directly working with the poverty alleviation fund.

S.N	Geographical Areas (Districts)	Subsidy rate
1.	20 districts of Terai as specified by GoN in Annex 2(1)	NPR 2,000 per plant
2.	40 hilly districts with road access as specified by GoN in Annex 2(2)	NPR 2,500 per plant
3.	15 remote districts without road access as specified by GoN in Annex 2(3)	NPR 3,500 per plant

Additional Subsidy for Toilet Attached Biogas Plant

Additional subsidy will be provided for toilet attached biogas plant to improve the household sanitary and increase the gas production. The additional subsidy amount of NPR 3,500 per plant in terai, NPR 4,000 in hilly area and NPR 4,500 in remote hilly areas will be provided to toilet attached biogas plants having capacity of 2, 4, 6 and 8 cubic meter. However, this subsidy will only be provided if various NGOs, INGOs and donors organizations working in toilet installation provide the support.

Subsidy for the Institutional Biogas Plant

Subsidy will be provided for the capacity of 4, 6 and 8 cubic meter plants using the other degradable things, except the dung from animals (cow and buffalo), which are used to produce biogas such as human waste, solid waste, agriculture residues etc. available in the public places such as educational institute, health post, policy and army barrack, religious places, old homes, orphanage homes etc.

S.N.	Geographical Areas(Districts)	Subsidy rate
1.	20 districts of Terai as specified by GoN in Annex 2(1)	NPR 8,000 per plant
2.	40 hilly districts with road access as specified by GoN in Annex 2(2)	NPR 12,000 per plant
3.	15 remote districts without road access as specified by GoN in Annex 2(3)	NPR 16,000 per plant

Subsidy for the Community Biogas Plant

Subsidy will be provided to those technically feasible community biogas plants using dung from animals (cow and buffalo), other degradable things, such as human waste, solid waste, agriculture residues, which are used to produce biogas.

S.N.	Geographical Areas (Districts)	Subsidy rate
1.	20 districts of Terai as specified by GoN in Annex 2(1)	NPR 6,000 per plant
2.	40 hilly districts with road access as specified by GoN in Annex 2(2)	NPR 9,000 per plant
3.	15 remote districts without road access as specified by GoN in Annex 2(3)	NPR 12,000 per plant

Note:

1) The community biogas plant capacity should be of 15 cubic-meters minimum so as to provide minimum of 3 cubic-meter plant capacity per household to fall under this subsidy policy.

2) This type of biogas plant can be build, owned and regulated by cooperative, educational, local community or private organizations.

3) Before starting of this kind of project, prior permission should be taken on the basis of feasibility study carried out by the AEPC or the institute recognized by APEC.

4) If there is change in the category of remote and accessible districts, it will be as specified by Ministry of Local Development (MoLD).

Transportation Subsidy

An additional transportation subsidy will also be provided along with the above mentioned subsidy for the remote districts under Annex 2(1).

S.N.	Districts	Subsidy rate
1.	12 remote districts as specified by GoN in Annex 2(3): Bhojpur, Darchula, Jajarkot, Khotang, Sankhuwasabha,	NPR 2000 per plant per household

	Bajhang, Bajura, Jumla, Kalikot, Manang, Mustang, and Solukhumbhu	
2.	3 remote districts without road access as specified by GoN in Annex 2(3): Dolpa, Humla and Mugu	NPR 4,000 per plant per household

3.4 Improved Water Mill

In most of the hilly and mountain areas of Nepal, agricultural product processing such as milling, hulling and shelling is done traditionally using water mills. Realizing its need and effectiveness in socio economic upliftment, subsidy is being provided by Government of Nepal to improved water mill programme since 2003/04 (NFY 2060/61). This has reduced drudgery of rural people, promoted environmental conservation, increased employment in rural areas resulting in socio-economic development and has itself developed into a reliable renewable energy resource. Subsidy for improved water mill is as follows:

1. NPR 12,000 for Grinding and NPR 27,000 for other end use activity in all districts except as specified in Annex-3

2. In addition to mentioned in (1), NPR 2,000 for Grinding and NPR 3,500 for other end use activity in 12 remote districts and not connected by roads as specified in Annex-3

3. In addition to mentioned in (1) NPR 3,000 for Grinding and NPR 4,500 for other end use activity in 3 remote districts and not connected by roads as specified in Annex-3

3.5 Improved Cook Stove (ICS)

3.5.1 No direct subsidy will be provided for the promotion of household mud improved cook stoves in Hilly and Mid-Hilly and Terai districts of Nepal.

3.5.2 Subsidy will be provided to efficient improved metal cook stove of defined size used for both cooking and space heating purposes in the households of High-Hill areas since they are expensive for general population and need to be transported to the remote areas after fabrication. A subsidy amount of NPR 2,700 for 2 pot hole metallic stoves and NPR 4,000 for 3 pot hole metallic stoves will be provided to the stoves that meet the standards defined by Alternative Energy Promotion Centre.

3.5.3 Subsidy will be provided to household and institutional gasifiers (modern stoves) to reduce the firewood consumption and significantly improve the indoor air pollution. A subsidy amount of NPR 2,000 but not exceeding 50%

of the cost will be provided to household gasifier. Similarly, a subsidy amount of NPR 5,000 but not exceeding 50% of the cost will be provided to institutional gasifier. The stoves should meet the standards defined by Alternative Energy Promotion Centre

3.5.4 Different organizations are involved in the promotion and development of ICS. These institutions have provided various kinds of supports. Close coordination will be established with NGOs and donor countries to make these kinds of direct and indirect support more effective.

3.6 Wind Energy

3.6.1 Further research will be done to certify the collected wind mapping data along with study and research in wind energy technologies. External financial and technical support will be given emphasized to do such activities.

3.6.2 Due to the estimated results based on establishment of limited numbers of research centers due to the national diversified geographical condition in Meso-scale, establishment of more research centers will be expanded for further research and study to get the result in Micro-scale.

3.6.3 Financial and technical support will be provided to promote solar and wind hybrid energy system in a rural areas where there is no national electricity transmission line and micro hydro power.

3.6.4 The subsidy will be provided on feasible electrification based on small wind turbine to provide the electricity in rural areas at a rate similar to MHP based on number of households served.

3.6.5 Study and research capacity will be increased for the development and promotion of the wind energy technologies.

3.7 Other Renewable Energy

Although there is no direct subsidy, studies, research & development, trainings and pilot projects will be undertaken in the field of other renewable energy, e.g., biomass briquette, institutional gassifier (for school hostels, hotels, etc.), bio-fuel, bio-ethanol etc. and geothermal energy applications.

4. Subsidy Delivery Procedure

4.1 Renewable/rural energy has proven to require credit for users to be able to afford the installation. Despite various efforts, access to credit in rural areas for renewable energy investment has been found to be utterly inadequate. In the long run, when subsidies are withdrawn, it is expected that credit replaces the subsidy and is only a reasonable way to expand the service delivery sustainably. The Government of Nepal desires that an appropriately long term credit at an affordable interest is available for investment in the field of renewable energy. In order to encourage financial institutions to invest in renewable energy efforts will be made in creating an institutional credit mechanism through credit-line and credit guarantee scheme under the Rural Energy Fund, which will supervise and disburse the subsidy. The necessary detail will be worked out in this regard in the delivery mechanism.

4.2 In order to disburse the above mentioned subsidy in simple and effective way,

AEPC will prepare the renewable energy subsidy delivery mechanism and concerned Ministry will approve it.

4.3 The above mentioned subsidy for renewable (rural) energy will be disbursed through AEPC.

4.4 The technological standards of the technologies promoted under this subsidy policy will be implemented according to AEPC's standards.

4.5 The level of subsidy will be reviewed every two year.

4.6 If a consumer installed energy system through nominated qualified companies for solar home system, micro-hydro projects, improved water mills, biogas, improved cook stoves etc. and submits the subsidy form in standard format, then the subsidy will be paid to him/her and for installing such energy system, installer will also be paid on behalf of consumer. No tax will be applicable in such kind of subsidy payment.

4.7 The districts and regions described under the annexes will be changed according to the GoN's revision, if applicable.

5. Annexes

Annex-1

S.N.	Districts	Category "A" VDCs	Category "B" VDCs
1	Solukhumbu	Khumjung, Namche, Chaurikharka, Jubing, Pawai, Chheskam, Bung, Gudel, Lokhim, Waku, Sotang	Kerung, Gora, Tapting, Makanje, Chaulakharka, Goli, Taksindhu, Beni, Loding, Salleri, Kaku, Wasa, Jubu, Panchan, Kagel, Maile, Mukli, Deusa, Garma, Nechaweldhari, Nechabatashe, Salyan, Tinla.
2	Manang	Dhyaru, Pisang, Bhraka, Khangsar, Manang, Tangkimanang, Nar, Phu	Thoche, Dharapani, Chame, Bagarchhap
3	Mustang	Dhami, Charang, Lomrathang, Chhondup, Chhoser, Surkhang.	Kagbeni, Chhusand, Muktinath, Lete, Marpha, Kunjo, Jhong, Kowang, Tukuche, Jomsom.
4	Rukum	All VDCs	-
5	Dolpa	All VDCs	-
6	Mugu	All VDCs	-
7	Humla	All VDCs	-
8	Jumla	All VDCs	-
9	Kalikot	All VDCs	-
10	Taplejung	Oolangchunggola, Papung, Yamfudin, Lalap	Iekhabu, Tapathok
11	Sankhuwasabha	Pawakhola, Hatia, Chapuwa, Num Kimathanka, Sisuya, Wala, Makalu, Wangtewa, , Yafu, Tamku, Mathivara	Diding
12	Dolakha	Bigu, Aalampu Gorshankar, Lamabagar	-
13	Rasuwa	Thuman, Timara, Lamtang, Chilima	Bridim, Haku Gatlang, Golgung
14	Gorkha	Lho, Samagau, Prok, Bihi, Chuchat, Chakampar	Sidhewas, Ueya, Kkaraujakasi, Gau, Manwula, , Prack, Gumda, Lapu
15	Rolpa	All VDCs	-
16	Acham	All VDCs	-
17	Sindhupalchok	Gumba, Phoolpingkati, Tatopani	-
18	Dhading	Lapa, Tpling	-
19	Jajarkot	All VDCs	-
20	Dailekh	All VDCs	-
21	Bajura	All VDCs	-
22	Bajhang	All VDCs	-
23	Darchula	All VDCs	-

Annex—2

SN	Category	Districts
1	20 Terai Districts as specified by GON	Banke, Bara, Bardiya, Chitwan, Jhapa, Dang, Dhanusha, Kailali, Kanchanpur, Kapilvastu, Mahottari, Morang, Nawalparai, Parsa, Rauthat, Rupandehi, Saptari, Sarlahi, Siraha and Sunsari
2	40 accessible districts in Hills as specified by GON	Achham, Dailekh, Myagdi, Okhadhunga, Ramechhap, Rukum, terhathum, arghakhanchi, Baglung, Baitadi, Dadeldhura, Bhaktapur, Dhading, Dhankuta, Dolakha, Doti, Gorkha, Gulmi, Ilam, Kaski, Kathmandu, Kavre, Lalitpur, Lamjung, Makwanpur, Nuwakot, Palpa, Panchthar, Parbat, Pyuthan, Rasuwa, Rolpa, Salyan, Sindhuli, Sindhupalchowk, Surkhet Syangja, Tanahu, Taplejung and Udaypur
3	15 remote, and not connected with motorable roads, districts in Hills as specified by GON	Bhojpur, Darchula, Jajarkot, Khotang, Sankhuwasabha, Bajhang, Bajura, Dolpa, Humla, Jumla, Kalikot, Manang, Mugu, Mustang, and Solukhummbu
4	40 low penetrated districts as specified by GON	Achham, Dailekh, Dailekh, Okhadhunga, Rukum, Baglung, Baitadi, Dadeldhura, Doti, Panchthar, Rolpa, Salyan, Taplejung, Dhanusha, Mahottari, Parsa, Rauthat, Saptari, Siraha, Sindhupalchowk, Arghakhanchi, Dolakha, Rasuwa, Pyuthan, Ramechhap, Kathmandu, Bhojpur, Darchula, Jajarkot, Khotang, Sankhuwasabha, Bajhang, Bajura, Dolpa, Humla, Jumla, Kalikot, Manag, Mugu, Mustang and Solukhumbu

Note: The meaning of low penetrated districts for biogas plant is the technically feasible above mentioned districts where less than 5% biogas plant is installed by the end of FY 2007/2008.

Annex—3(1)

SN	Category	Districts
1	12 remote, or not connected with motorable roads, districts in Hills as specified by GON	Bhojpur, Darchula, Jajarkot, Khotang, Sankhuwasabha, Bajhang, Bajura, Jumla, Kalikot, Manang, Mustang, and Solukhumbhu

Annex—3(2)

SN	Category	Districts
1	3 very remote , or not connected with motorable roads, districts in Hills as specified by GON	Dolpa, Humla, and Mugu