

(Unofficial Translation)



Government of Nepal
Ministry of Science, Technology and Environment

Subsidy Policy for Renewable Energy 2069 BS

February 2013

1. Background

Nepal is endowed with good renewable energy potential. The major sources of renewable energy are hydropower, solar energy, various forms of biomass energy, biogas and wind energy etc. Despite huge renewable energy potential still around 85% of the total final energy consumption in Nepal is met by traditional biomass and only 56% of households in Nepal have access to electricity. Majority of people in Nepal are living in rural areas and are poor. It is not possible to significantly improve the living standard of the rural poor if their demand for clean energy services is not met. Extension of national grid to reach those areas is not possible in many years to come due to the difficult terrain, high cost and also there is an enormous energy crisis in the country. Therefore, clean and sustainable energy such as renewable energy technologies are the solutions.

2. Past Effort

Government of Nepal has been supporting for promotion and development of renewable energy technologies since past two decades with the support from development partners, and private sector. The initiative taken has been fruitful and there are significant achievements in the development of renewable energy in the country.

3. Present Situation

Till date, around 12% population has access to electricity through renewable energy sources. Around 23 MW of electricity has been generated from micro hydro schemes, 12 MW from solar PV system, less than 20 KW from wind energy etc. More than 1.5 million households are benefited from different renewable energy sources both for cooking, lighting and end uses. The Government of Nepal and various Development Partners have been providing financial and technical support to increase the access to clean renewable energy. But majority of the population under poverty level living in the rural remote areas are out of access to clean energy due to high initial upfront cost of the renewable energy technologies.

4. Major Problems and Challenges

The renewable energy services are not equitably distributed across Nepal. Past subsidy policies have been successful to mobilize people and communities mainly around the more accessible areas of the Country to install renewable energy schemes. However, people living in the remote and very remote areas and the poor households are mostly deprived of such energy services due to the high initial cost of the renewable energy technologies, low income of households, and low capacity of the institutions involved in the development of renewable energy services at local level.

5. Need for New Policy

It is felt necessary to make adjustment in the existing subsidy policy for increasing the access to more remote part of the country and to the poorest and socially disadvantaged

people. In addition, this subsidy policy should encourage private sector to commercialize the renewable energy technologies, and focus on better quality and service delivery in rural areas. The current subsidy policy is not smart and addresses the pro poor. The subsidy should link with the credit and it should be gradually replace by the credit in the long-term.

Considering the subsidy to promote the technologies, and reduce the initial upfront cost so that the low income households can afford the technologies to make the current subsidy policy equitable, inclusive and effective, this Renewable Energy Subsidy Policy, 2013 has been formulated.

6. Long-term Goal

To accelerate renewable energy service delivery with better quality, comprising various technologies, to households, communities and micro, small and medium sized enterprises in rural areas, to benefit men and women from all social groups, leading to more equitable economic growth, besides development of renewable energy industry and attracting private investment in large capacity of renewable energy projects in the country.

7. Objectives

The objectives of the subsidy policy will be as follows:

- 7.1 To increase the access to the renewable energy technologies to low income households by reducing the initial upfront cost.
- 7.2 To maximize the service delivery and its efficiency in the use of renewable energy resources and technologies in the rural areas, and to provide opportunity to poor and socially disadvantaged rural households to use renewable energy solutions and minimize regional disparity.
- 7.3 To support use of energy for productive purpose thereby creating rural employment and enhancing livelihood of rural people particularly women, poor and socially excluded group, vulnerable community through increasing their access to renewable energy.
- 7.4 To support rural electrification as well as gradually reduce the growing gap of electricity supply, consumption between rural and urban areas.
- 7.5 To support development and extension of renewable energy market by attracting private sector entrepreneurs.
- 7.6 To support to the envisaged long-term targets of Government in providing rural electrification and energy services.
- 7.7 To encourage rural households in the use of renewable energy services thereby contributing to better health and education conditions of people.

8. Subsidy Type and Level

The Category “A” Village Development Committees, Category “B” Village Development Committees, and Category “C” Village Development Committees (herein after called Category “A” VDCs, Category “B” VDCs, and Category “C” VDCs respectively) means

very remote VDCs, remote VDCs, and accessible VDCs as mentioned in Annex 1 for the purpose of the subsidy amount as defined by the Government of Nepal. While designing the subsidy rate, the basis of around 40% of the total cost will be covered by subsidy, around 40% by the soft loan from the financial institutions, and rest minimum of 20% by the community or households in kind and cash.

8.1 Mini and Micro Hydro Power and Improved Water Mill

The subsidy to micro and mini hydro with capacity of less than 1000 kW or 1 MW will be provided based on the actual power generation and number of actual households connected in the areas where there is no electricity by grid and no immediate plan of the Government for grid extension. The subsidy for different categories is as follows:

8.1.1 Community/Cooperative owned Mini hydro

8.1.1.1 The subsidy for community/cooperative owned mini hydro off- grid from 100kW to 000 KW (or 1 MW) projects will be as follows:

Subsidy Category	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Subsidy per household	20,000	18,000	16,000
Subsidy per kW	120,000	100,000	70,000
But, the maximum subsidy amount per kW including household subsidy will not exceed Rs. 220,000, Rs. 190,000 and Rs. 170,000 for Category "A", Category "B" and Category "C" VDCs respectively.			

8.1.1.2 Projects from 100kW to 500kW should connect at least 500 households or at least 5 households per kW to be eligible for the above mentioned subsidy amount. Similarly, projects from 500kW to 1000 kW should connect at least 1000 households or at least 5 households per kW to be eligible for subsidy.

8.1.2 Mini Hydro connected to Grid

For mini hydro project connected to grid, the household subsidy will be provided based on number of households connected to the plant. The subsidy amount per household to be connected to grid will be Rs. 15,000

8.1.3 Micro Hydro Power

The subsidy for micro hydro from 10kW to 100 kW projects will be as follows.

Subsidy category	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Subsidy per household	25,000	25,000	25,000

Subsidy per kW	130,000	100,000	70,000
But, the maximum subsidy per kW including household subsidy amount will not exceed Rs. 255,000, Rs. 225,000 and Rs. 195,000 for Category "A", Category "B" and Category "C" VDCs respectively. In the basis of possibility of the use of the electricity from micro hydro project in the productive end use in future, the subsidy for additional one kilowatt per maximum of 5 households will be provided.			

8.1.4 Pico Hydro Power

The subsidy for pico hydro below 10 kW projects will be as follows.

Subsidy category	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Subsidy per household	15,000	15,000	15,000
Subsidy per kW	90,000	80,000	60,000
However, the maximum subsidy amount per kW will not exceed Rs. 165,000, Rs. 150,000 and Rs. 135,000 in category "A", category "B" and category "C" VDCs respectively.			

But the subsidy for institutions and community use like temples, religious locations, community radio facilities and hospitals will be limited to subsidy per kilowatt as mentioned in above table.

8.1.5 Rehabilitation of Damaged Projects

Subsidy will be provided for rehabilitation of damaged mini and micro hydro projects. However, rehabilitation subsidy amount will not exceed Rs. 10,000/kW but not exceeding Rs. 200,000 per plant (minor) damage of civil structures to Rs. 50,000 (specific) per kW but not exceeding Rs.1,000,000 when major damage of power house equipment or rehabilitation of old micro/mini hydro projects supported under Government of Nepal's financial support.

8.1.6 Additional Subsidy

The additional subsidy of Rs. 2,500 per household will be provided to households with single woman, backward, disaster victim, conflict affected, poor and endangered ethnic group as identified by the Government of Nepal.

8.1.7 Improved Water Mill

8.1.7.1 The subsidy for improved water mill for mechanical applications will be as follows.

Type of Improved Water Mill	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Short Shaft	20,000	18,000	16,000

Long Shaft	40,000	38,000	35,000
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8.1.7.2 The subsidy for community owned improved water mills, if it is electrifying the villages, will be as follows:

Subsidy Category	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Subsidy (per household)	8,000	7,000	6,000
Transportation subsidy per kW	20,000	10,000	5,000
But, the maximum subsidy amount per kW will not exceed Rs. 90,000, Rs. 80,000 and Rs. 70,000 in category "A", category "B" and category "C" VDCs respectively.			

8.2 Solar Energy

Solar Energy technology is one of the important and popular renewable energy technologies in Nepal. Presently, Government of Nepal is promoting small solar home systems, solar home systems, Institutional Solar Systems and some solar thermal systems like solar dryers and solar cookers.

The following subsidies will be provided for solar home system, small solar home system, institutional solar photovoltaic system, photovoltaic pumping system, solar cooker and solar dryer to make the policy more pro poor and inclusive.

8.2.1 Solar PV Systems

8.2.1.1 Subsidy for solar PV home systems will be as follows:

Solar PV Systems	Subsidy Amount in Rs.		
	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
Small Solar Home System with 10 Watt Peak (per HH per system)	5,000	4,800	4,500
20 Watt Peak - 50 Watt Peak Solar PV System (per HH per system)	7,000	6,200	6,000
> 50 Watt Peak Solar PV System (per HH per system)	10,000	9,000	8,000

8.2.1.2 The maximum subsidy amount of 75% of the total systems cost but not exceeding Rs. 1000,000 will be provided for solar photovoltaic system to be installed in public institutions like school, health post. If the system is used only for lighting purpose in religious place, subsidy amount will be same as the SHS.

8.2.1.3 The subsidy for the PV pumping system for drinking water to be managed by community will be provided up to 75% of the total system cost but not exceeding Rs. 1500,000 per system. The additional subsidy of Rs. 2500 per household will be

provided to household with single woman, backward, disaster victim, poor, and endangered ethnic group as identified by the Government of Nepal.

8.2.1.4 The Ministry will prepare the guideline for the management of the lead acid battery to be used in solar energy.

8.2.2 Solar Thermal

Subsidy for solar thermal technologies will be provided in the rural areas only. The following will be the subsidy for the various types of solar thermal technologies:

8.2.2.1 The maximum subsidy amount of 50% of the total cost but not exceeding Rs. 10,000 will be provided for the specified solar cooker per household.

8.2.2.2 The maximum subsidy amount of 50% of the total cost but not exceeding Rs. 15,000 will be provided per household for specified domestic scale dryer with drying area of 3-20 sq ft.

8.2.2.3 The maximum subsidy amount of 50% of the total cost but not exceeding Rs. 100,000 will be provided for specified medium scale commercial dryer with drying area of 20-85 sq ft.

8.2.2.4 The maximum subsidy amount of 50% of the total cost but not exceeding Rs. 150,000 will be provided for specified large scale institutional or commercial dryer with drying area of more than 85 sq ft. Additional Rs. 20,000 will be provided if the at least 50% of the target groups are single women, backward, disaster victim, conflict victim, endangered ethnic group identified by the Government of Nepal.

8.3 Biogas

Biogas can play an important role in the reduction of poverty and mitigating climate change impacts while meeting the need of clean cooking and electrical energy requirements. Biogas has high potential on reducing fuel wood consumption, multiple benefits on health/sanitation improvement and positive impacts on the child education improvement. The subsidy is applicable to GGC 2047 Model, the GGC 2047 modified model and the other approved models of various capacities for household/domestic purpose and feasible plants/projects to serve the communities, public institutions, commercial enterprises and municipalities.

8.3.1 Domestic Biogas Plant

8.3.1.1 Subsidy for domestic biogas plant by using cattle dung as main feedstock with capacity ranging from 2-8 cubic meters (Cum) will be as follows:

Region	Subsidy Amount in Rs.			
	2 Cum	4 Cum	6 Cum	8 Cum
Mountain Districts as specified by GoN	25,000	30,000	35,000	40,000
Hill Districts as specified by GoN	20,000	25,000	30,000	35,000
Terai Districts as specified by GoN	16,000	20,000	24,000	25,000

8.3.1.2 The additional subsidy will be provided to household with single woman, backward, disaster victim, conflict affected, poor and endangered ethnic group as identified by the Government of Nepal as follows:

Region	Subsidy Amount in Rs.		
	2 Cum	4 Cum	6 Cum
Mountain Districts as specified by GoN	3,000	3,500	4,000
Hill Districts as specified by GoN	2,000	2,500	3,000
Terai Districts as specified by GoN	2,000	2,500	3,000

8.3.1.3 In case of biogas using the kitchen waste and other household bio-degradable waste, the subsidy amount of Rs. 10,000 or 50% whichever is less will be provided to the specific design of the domestic biogas plants with capacity less than 4 cubic meters suitable in urban areas to maximum use of the household waste, improve the urban environment and reduce the consumption of imported fuel.

8.3.2 Large Biogas Plants

8.3.2.1 The large plants with more than 12 cubic meter capacity utilize bio degradable materials such as human waste, solid waste, agriculture residues etc. available in the public institutions such as educational institute, health post, police and army barrack, religious places, senior citizen homes, and orphanage homes. Given the strong social inclusion and enterprise development potential associated with the community biogas plants, the subsidy for community biogas plants shall be prioritized to productive end uses.

8.3.2.2 All commercial enterprises such as poultry farms, cattle farms, slaughter houses, small/cottage industries etc that are owned by private entity are considered to be commercial entities. The enterprises with high volume of organic waste production have a high potential of biogas production. The energy thus produced can either be distributed or self consumed.

8.3.2.3 Waste-to-energy is the energy production in the form of electricity or heat from the waste source. The current concept envisions utilizing waste produced in large scale, such as the municipal wastes for energy production through biogas. The concept of Waste to Energy tries to address both the issues of waste management and energy

recovery. The subsidy in case of waste to energy plants has been calculated on the basis of the capacity of the installed plant to handle waste in tons of waste per day.

8.3.2.4 Subsidy for larger biogas system will be provided as follows:

Biogas Systems	Subsidy Amount in Rs.	
	Thermal Application per cum	Electricity Generation per kW
Commercial Biogas Plants	4,000	65,000
Institutional Biogas Plants for Public Institutions	11,500	185,000
Community Biogas Plants with capacity more than 12 cubic meters	9,000	150,000
Municipal Scale Waste to Energy Systems	50% of the total cost but not exceeding Rs. 50,000 per cum.	50% of the total cost but not exceeding Rs. 250,000/Kw, whichever is less.

8.4 Biomass Energy

Biomass is the primary fuel of the country. Various types of mud and metallic improved cooking stoves have great scope to replace the traditional cooking stoves that burn fire wood for cooking and heating. The improved cooking stoves reduce fuel wood consumption by improved efficiency and improve cleaner indoor environment which further improve the health of women and children by reduced indoor air pollution. The biomass gasifiers used for thermal application and electricity generation has great potential to reduce or replace imported fossil fuel such as coal, diesel etc. Micro, small and medium scale enterprises in rural and sub-urban areas can use biomass gasifiers for providing thermal energy to process various local agro products into high value products. Similarly, small and isolated communities can use biomass gasifier to generate electricity where no other means of electrification is available. Biomass briquetting and pelleting can be used as alternative fuels in the areas where there is scarcity of fuel wood but good availability of loose biomass.

Subsidy will be provided to specific design biomass energy technologies or systems as follows:

8.4.1 No direct subsidy will be provided for the promotion of household mud improved cook stoves. But local bodies are encouraged to provide some financial support to install mud ICS to household with single woman, backward, disaster victim, poor and endangered ethnic group as identified by the Government of Nepal.

8.4.2 The subsidy amount of Rs. 3,000 and Rs. 4,000 will be provided for household metallic improved cook stove for less than or two pot hole, and three pot hole types respectively. But such subsidy amount will not be more than 50% of the total cost.

- 8.4.3 The subsidy amount of Rs. 20,000 but not more than 50% of the stove cost will be provided for the metallic improved cook stove to be installed in public institutions like public school, hospital/health post, police and army barracks, religious places, and orphanage homes.
- 8.4.4 The subsidy amount of Rs. 2,000 but not more than 50% of the stove cost will be provided for the metallic rocket stoves less than or two pot hole.
- 8.4.5 The subsidy amount of Rs. 150,000 but not more than 50% of the plant cost will be provided to metallic gasifier plant for thermal application for agro-processing by small, medium and cottage enterprises.
- 8.4.6 The additional subsidy of Rs. 1,000 will be provided for the metallic improved cook stoves to be installed in single woman, backward, disaster victim, and endangered poor household, ethnic group as identified by the Government of Nepal.
- 8.4.7 If the electricity is generated from the biomass energy sources, the maximum subsidy amount of Rs. 200,000 per kilowatt installed capacity or 50% of the cost whichever is less will be provided for the biomass power plant.

8.5 Wind Energy

The wind energy can be harnessed both for the mechanical and electrical application. In some parts of the country, there is good potential of wind energy for the electricity generation. It is necessary to develop the wind energy in the areas with high and more uniform wind speed to provide the electricity in rural areas where is no electricity from other means.

- 8.5.1 The subsidy for electricity generation by wind energy alone or solar-wind hybrid energy system will be provided as follows:

Capacity of Wind Turbine	Subsidy Category	Subsidy Amount in Rs.		
		Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
<10 kW	Per household	20,000	18,000	16,000
	Per kW	150,000	125,000	100,000
10-100 kW	Per household	20,000	18,000	15,000
	Subsidy per kW	175,000	150,000	125,000
But, the total subsidy per kW including household subsidy will not exceed 50% of the per kilowatt cost.				

8.6 Productive Energy Use

Productive energy use promotion seeks to enable the translation of renewable energy provision into positive economic outcomes for Micro, Small and Medium Enterprises. In order to make renewable energy projects sustainable and to increase livelihood of rural

people using renewable energy, the following subsidy provision are made for enterprises based on renewable energy technologies for the productive use of energy. Enterprise eligible for end use subsidy is defined as “Productive energy use based entity which is capable of generating income and employment that uses any form of energy from renewable energy sources for the generation of product/services”.

- 8.6.1 For isolated mini and micro hydropower based enterprises, a subsidy amount of 30% of the total investment cost for energy conversion and processing equipment, and/or hardware part of the enterprise/business but not exceeding Rs.100,000 will be provided for private enterprises, whereas that of 50% or Rs. 300,000, whichever is less, will be provided for community based enterprises.
- 8.6.2 For enterprises based on renewable energy other than mini and micro, including both thermal and electrical applications, a subsidy amount of 30% of the total investment cost for energy conversion and processing equipment, and/or hardware part of the enterprise/business but not exceeding Rs. 100,000 will be provided.
- 8.6.3 The additional subsidy of 10% but not exceeding Rs. 10,000 will be provided to developer/entrepreneur with single woman, backward, disaster victim, poor and endangered ethnic group as identified by the Government of Nepal.

9. Subsidy Delivery Procedure and Other Provision

In addition to subsidies, access to credit facilities for users will have a profound influence in the adoption of renewable energy systems. 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 will replace the subsidy and will be 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 Central Renewable Energy Fund, which will supervise and disburse the subsidy.

- 9.1 In order to disburse the above mentioned subsidy for various renewable energy technologies or systems in simple, effective and transparent way, Alternative Energy Promotion Centre (AEPC) will prepare the renewable energy subsidy delivery mechanism and the Ministry will approve it. The subsidy delivery mechanism will also include the financial support to be provided for the detail feasibility studies for various renewable energy projects or systems, penalty systems, technical standard and guideline etc.
- 9.2 In addition to subsidy, there will be soft loan to the various renewable energy technologies or systems through the financial institutions. The credit mechanism will be developed in such a way that the poorest people will have access to such credit in simple way.

9.3 The above mentioned subsidy amount for renewable energy technologies or systems will be disbursed through AEPC.

9.4 The rural household or communities will get the subsidy as grant for renewable energy technologies or systems supplied and installed by qualified private companies. So, all taxes will be exempted in such kind of subsidy payment.

9.5 The districts and VDCs described under the annex will be changed according to the GoN's revision, if applicable.

9.6 The level of subsidy will be reviewed as per need or every two year.

10 Repeal

The Renewable (Rural) Energy Subsidy Arrangement 2009 and Additional Financial Support Mechanism for Micro and Mini Hydro 2011" have been repealed.

11 Annexes

Annex -1

S.N	Districts	Category "A" VDCs	Category "B" VDCs	Category "C" VDCs
1.	Solukhumbu	Khumjung, Namche, Chaurikharka, Jubing, Chheskam, Bung, Gudel, Waku, Sotang	Kerung, Taptung, Mawe, Chaulakharka, Goli, Taksindhu, Beni, Loding, Tamakhani, Salleri, Kaku, Wasa, Jubu, Panchan, Kagel, Mukali, Deusa, Garma, Nechabedaghari, Nechabatashe, Salyan, Tingla, Bhakanje, Lokhim, Gorakhani, Nele	All other VDCs of the districts mentioned here and remaining districts of the country
2.	Manang	Dhyaru, Pisang, Bhraka, Khangsar, Manang, Tangkimanang, Nar, Phu	Thoche, Dharapani, Chame, Bagarchap	
3.	Mustang	Dhami, Charang, Lomanthang, Chhondup, Chhoser, Surkhang.	Kagbeni, Chhusang, Muktinath, Lete, Marpha, Kunjo, Jhong, Kowang, Tukuiche, 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	Olangchunggola, Papung, Yamfudin, Lelep	Iekhabu, Thapethok	
11.	Sankhuwasabha	Pawakhola, Hatia, Chepuwa, Num Kimathanka, Sisuwa, Wala, Makalu, Mangtewa, , Yafu, Tamphu, Pathibhara	Diding	
12.	Dolakha	Bigu, Aalampu, Gaurishankar, Lamabagar	Khare, Marbu, Orang, Chilankha	
13.	Rasuwa	Thuman, Timure, Lamtang, Chilime	Bridim, Haku, Gatlang, Goljung	
14.	Gorkha	Lho, Samagau, Prok, Bihi, Chunchet, Chekampar	Sirdiwas, Ueya, Kerauja, Khasigaun, Manbu, Laprak Gumda, Lapu	
15.	Rolpa	All VDCs	-	
16.	Achham	All VDCs	-	
17.	Sindhupalchowk	Gumba, Phoolpingkati, Tatopani	-	
18.	Dhading	Lapa, Tipling	-	
19.	Jajarkot	All VDCs	-	
20.	Dailekh	All VDCs	-	
21.	Bajura	All VDCs	-	
22.	Bajhang	All VDCs	-	
23.	Darchula	All VDCs	-	