**(Unofficial Translation)**

Government of Nepal

**Ministry of Environment**

Alternative Energy Promotion Centre

# Renewable (Rural) Energy Subsidy Delivery Mechanism, 2010

**February 2010**

**(Approved date by Ministry of Environment on 21 February 2010)**

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# Renewable (Rural) Energy Subsidy Delivery Mechanism, 2010

## 1. Introduction

This Delivery Mechanism has been prepared according to the article 4.2 of the Subsidy Arrangement for Renewable (Rural Energy) 2066 BS approved by the Government of Nepal's decision (Council of Ministers) dated 30th August 2009 (2066/5/14 B.S.). This mechanism will be effective from the date of approval by the Ministry of Environment.

## 2. Definition

For the purpose of this delivery mechanism, the following words have been defined as follows:

a. **Rural Energy Fund (REF):** A fund established to deposit and disbursed as subsidy in the forms of economic assistance made available from various sources including the Government of Nepal and external development partners for the development of renewable (rural) energy.

b. **Technical Review Committee (TRC):** A committee established to review the technical, environmental, status of vulnerable community and economic feasibility study of mini and micro hydro project under AEPC.

c. **Mini-Grid:** Mini-Grid is defined as an independent electronic network of mini and micro hydro projects fulfilling local demand through own generating capacity (one or several generators) and to supply a local demand. Mini-Grids can be operated locally in an isolated mode like the present micro-hydropower or may be connected to the national grid. Mini-Grids can be comprised of various generators, transformers and lines with different voltage levels including 1.1 kV lines.

d. **Regional Renewable Energy Service Centre**: This refers to those non-government organizations (NGOs) that have been or will be selected to support AEPC in development and expansion of renewable energy.

e. **Rural Energy Service Centre (RESC):** This refers to the private technical service centre, established or strengthened at district level to support AEPC in the development and promotion of renewable (rural) energy.

f. **Household or Family:** This refers to a dwelling occupied by a single family.

g. **Household or Family in High Altitude:** This refers to household or family living at altitudes of and above 2000 metres mean sea-level as well as in VDCs intersected by 2000 metre contour line and north facing houses or families residing in the VDCs located at altitudes of 1500 metres and above.

h. **Installed/Output Capacity of the Project**: Refers to the actual kilowatt of electricity generated upon completion of the project construction.

i. **Public Institution:** This refers to an organized institution based on equal access to mutual benefit and advantage of the community. Such institutions refer to government school, Village Development Committees (VDC), District Development Committees (DDC), Health Post/Centre, Cooperative community owned Club, institution with more than 50 percent of community shares or community owned and managed entity for income generation, employment and other social services.

j. **Community Institution and Functional Group:** This refers to an organized institution based on equal ownership and access for mutual benefit and advantage of households in a community. Similarly, the institutions constituted on the basis of mutual benefit and advantage for installation and operation of micro hydro project by community institutions operating in the community are known as Functional Groups.

k. **Commercial Purpose:** This refers to income generating activities undertaken by an individual, a community or a public institution. Also this refers to production of marketable commodity by community with the objective of raising the living standard of not only for household use but also community.

l. **Rehabilitation:** This refers to the restoration/improvement of already installed mini-grid rural electrification systems. Rehabilitation could be on the generation, transmission or distribution area.

m. **Motor Road:** This refers to a road, where a tractor can operate for at least 5 months in a year.

n. **Turnkey Contract:** This refers to an arrangement wherein a single contractor/company is responsible for entire works for construction, installation and operation of the project plant. It includes contractual agreement for material supply, installation/construction, testing, commissioning, training, and guarantee. A turnkey contractor, however, can have a separate agreement with a mini-grid developer for arrangement of local material and labour.

o. **Engineer-Procure-Construct (EPC):** This refers to a situation where in a single company takes the entire responsibility for the plant construction and project engineering (detailed design), equipment and construction material procurement, on-site construction and the handing over of the project.

p. **Solar Home System:** This refers to a solar electricity system having a solar photo voltaic (PV) panel with a capacity of 10 watt peak or more, a battery, a battery charge controller and an appropriate number of lights.

q. **Small Solar Home System:** This refers to a solar electricity system having a solar photovoltaic (PV) panel with a capacity of minimum 5 watt peak or more, a battery, a battery charge controller and a minimum of 2 set of lights.

r. **Institutionall Solar Home System**: This refers to a stand-alone system of solar photovoltaic technology to be used in public or community institutions for the lighting, education, communication, health, etc.

s. **Solar Photovoltaic Pump System:** Solar Photovoltaic Pump System refers to an energy system based on solar photovoltaic technology designed for pumping drinking water and small-scale irrigation (drip irrigation).

t. **District Energy and Environment Section/Unit (DEES/U**): This refers to the Energy and Environment Section/Unit under the DDC.

u. **District Rural Energy and Environment Management Committee**: This refers to a committee chaired by the DDC Chairperson to oversee the daily operation of district rural energy and environment related activities.

v. **District Energy Committee:** This refers to a committee chaired by the DDC chairperson with representatives from institutions working on the energy and environment sector to guide, coordinate and implement the programme at district and community levels.

w. **District Energy Fund:** This refers to a fund established in the districts of the Rural Energy Development Programme (REDP) districts to channel the financial resources for energy development as well as to mobilize resource to be made available from different sources.

x. **Support Organisation:** This refers to a district based NGO selected to undertake community mobilization activity in the REDP districts.

y. **Community Organisations (COs):** This refers to self-organised institutions and those formed through community mobilization process.

z. **Functional Groups (FGs):** This refer to those groups that are formed with equal representation from all beneficiary COs for the implementation of activities at community level.

aa. **Improved Water Mill (IWM):** A Water mill is a device used for grinding grain through the 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.

bb. **Water Mill Improvement Service Centre:** This refers to a district-based recognized organization for survey, installation, after sales services of IWM.

cc. **Mill Owners' Association:** This refers to an association formed under the organisation Registration Act 2034 (with amendment) for the protection of the interests of mill owners and promotion of their business.

dd. **Mill Electrification:** This refers to a process of electrification through the IWM of up to 5kW.

ee. **Investment from Local Government Entity:** This refers to the financial support in the form of investment from the DDC, VDC and Member of Parliament Fund.

## 3. Institutional Mechanism

Indirect subsidy technical assistance will be provided to renewable (rural) energy developments through the Biomass Energy Support Programme (BESP), Solar Energy Support Programme (SSP), Mini Grid Support Programme (MGSP), Rural Energy Development Programme (REDP), Biogas Support Programme (BSP), Improved Water Mill Programme (IWMP), etc.

The direct subsidy will be mobilised through AEPC's Rural Energy Fund (REF). However, until and unless there is a mechanism to channel all the funds through REF, the disbursement of subsidy under various programmes will continue as per the existing arrangement.

## 4. Subsidy Criteria and Delivery Mechanism: Non-Electrification

### 4.1. Solar Dryer and Cooker

To facilitate a reduction in the market's dependence on fossil fuels like imported petroleum fuel, solar dryers and cookers will be distributed to all districts in Nepal to encourage the maximum use of solar thermal energy for water heating, cooking and drying of agricultural crops.

Regarding the implementation of these products in the districts, AEPC will be responsible for the promotion, dissemination, market regulation, quality assurance, and monitoring of solar dryers and cookers. AEPC will formulate all the necessary quality standards and guidelines and will provide technical assistance to the manufactures/distributors of solar dryers and cookers. AEPC will also provide subsidies to users through the pre-qualified companies.

AEPC will qualify companies periodically for the manufacturing, distribution, installation, and after-sales services of solar dryers and cookers. In addition, AEPC will ensure that users get quality products at reasonable prices through competitive marketing. To ensure this, AEPC will monitor the field installations and conduct surveys, studies, etc.

#### 4.1.1. Subsidy Delivery

For the subsidy, the qualified companies will have to submit all required documents to AEPC with a covering letter. Once AEPC receives the applications, it will process and appraise the applications. This will involve computerised recording/capturing of data, evaluation of fulfilment of criteria and documentation, etc. AEPC will approve the subsidy if everything is found to be in order. AEPC has the right to withhold 10% of the subsidy amount for guarantee of the after sale services and warranty for a period of one year. AEPC will make available all the necessary arrangements for the monitoring of after-sales services and warranty.

#### 4.1.2. Criteria for Subsidy

In order to be eligible for a subsidy, a solar dryer and cooker must comply with the following conditions.

a) Subsidy will only be available for solar dryer and cooker that are to be used within Nepal.

b) Priority will be given to the remote/rural areas for the subsidy to solar dryer and cooker.

c) Subsidy will only be available for the solar dryers and cookers that are recognized by AEPC.

d) Qualified companies must manufacture or import, distribute and install solar dryers and cookers.

e) The subsidy request must be made in the AEPC prescribed application form.

f) The application form must be submitted along with a copy of the user's citizenship certificate for household use, and with a copy of registration certificate issued by concerned authority for institutional use.

### 4.1.3. Monitoring and Evaluation

Field monitoring and verification of installed solar dryers and cookers will be conducted by AEPC or through independent consultants. Approximately 10 percent of all installed solar dryers and cookers will be randomly monitored in the field after a year of the installation.

Based on the data and information received from the installation site, the performance of companies will be evaluated and penalty in accordance with the predetermined criteria and guideline will be levied for subsidy claim without installation or for irregularity committed and in the event of guideline not in place, a 200 percent penalty will be imposed. In addition, AEPC will also carry out field monitoring and verification regularly or when required based on complaint or report.

## 4.2. Institutional Solar PV System (ISPS) and Solar PV Pumping System (PVPS)

AEPC will be responsible for the promotion, dissemination, quality assurance, and monitoring of ISPS and PVPS. It will provide technical assistance to ISPS and PVPS manufactures and provide subsidy to users through pre-qualified companies.

AEPC will qualify companies periodically for the manufacturing, distribution, installation, and after-sales service of ISPS and PVPS. AEPC may recognise the existing companies qualified for solar home system installations for institutional system as well. AEPC will also ensure that users get quality products at reasonable prices through competitive marketing. To ensure this, AEPC will monitor the field installations and conduct surveys, studies, etc.

### 4.2.1. Subsidy Delivery

Institutions willing to install an ISPS and PVPS shall approach AEPC for guidance and submit a Reality Check form in AEPC's prescribed format. AEPC will appraise the information against Reality Check criteria and condition and will invite to submit a feasibility report for project that fulfils the required criteria and condition. The institution has to submit a feasibility study report in AEPC prescribed format along with the name of recommended pre-qualified companies to APEC.

AEPC will approve the proposal if it is found by evaluation of the feasibility report that the project meets all the stipulated criteria and condition. After this, the institution will be

required to complete AEPC prescribed ISPS or PVPS subsidy application form and submit it to AEPC. AEPC will approve the subsidy if the institution meets all the criteria. After getting approval, the institution has to enter into agreement with a pre-qualified supplier of ISPS and PVPS for the import, installation and other services AEPC may then release 50 percent of the subsidy amount as an advance against a bank guarantee to the supplier. Upon submission of a testing and commissioning report, with certification of installations from concerned VDC/DDCs, AEPC will release up to 90 percent of the net subsidy, if AEPC considers appropriate.

After a year of satisfactory functioning of the installed system and with the confirmation of user's satisfaction with the ASS provided by the company/institution, AEPC will release the remaining 10 percent of the subsidy. Depending on the need, AEPC may monitor ASS and guarantee or may carry out through the DEES/U of respective district. In order to be eligible for the subsidy, an ISPS and/or PVPS must comply with the following conditions:

a) ISPS or PVPS can either be an Alternative Current (AC) or Direct Current (DC) or a combination of them system in the stand-alone mode.

b) Subsidy for ISPS/PVPS will be available for legally registered public institutions and active organized groups at community level such as Mothers' Group, User Groups, etc.

c) Subsidy for ISPS/PVPS will not be available for areas that have been already served by micro-hydro or national grid connection.

d) ISPS/PVPS components must comply with the technical specifications stipulated in the Nepal Photovoltaic Quality Assurance (NEPQA) standard and have to be tested and certified by the Renewable Energy Test Station (RETS).

e) Appliances like computer and printer, refrigerator, water storage tank, etc, will not be included for subsidy under the ISPS/PVPS.

f) Only the AEPC pre-qualified companies will be allowed to manufacture, distribute, and install ISPS and PVPS.

g) Only Engineers who are affiliated to AEPC recognised companies are authorised to carry out feasibility study, design and supervise installation process of ISPS/PVPS.

### 4.2.2. Monitoring and Evaluation

AEPC may hire independent consultants for carrying out field monitoring and verification of installed ISPS and PVPS.

Based on the data and information received from the installation site, the performance of companies will be evaluated and will be penalised in accordance with the predetermined criteria and guideline if subsidy is claimed without installation or for irregularity committed. In addition, AEPC will also carry out field monitoring and verification regularly or when required based on complaint or report.

## 4.3. Biogas Programme

The Biogas Coordination Committee (BCC), with AEPC's Executive Director as the chairperson, will primarily be responsible for the overall coordination, guidance, and monitoring of entire programme and activities of the Biogas Support Programme (BSP). The other members of BCC will be representatives from the Implementing Agency, the National Planning Commission, a relevant financial institution, Nepal Biogas Promotion Association (NBPA) and related external donors.

If necessary, the Chairperson of Biogas Coordination Support Group may be invited to meeting. Coordination Support Team (CST) chaired by AEPC representative with members from implementing agency, NBPA, and relevant external donor representative will provide necessary support to CST to take policy decisions on matters related to programme implementation.

While subsidy was only being provided to cattle-dung operated household biogas plants of 2, 4, 6, and 8 cubic metres in the past, the current subsidy policy has provision for the inclusion of feasibility study and demonstration scheme for distributing gas in surrounding areas by constructing community and institutional plants that use manures and solid waste in addition to cattle-dung.

Besides, the plant of 2 cubic meter size for household use is included in subsidy program at one hand, and provision for additional subsidy in plant of 2, 4, and 6 cubic meter size for the poor also is included in the subsidy arrangement on the other hand. Similarly the additional subsidy for poor will be provided to marginalized, ethnic group, distressed and conflict affected also. Considering the difficulty in promoting biogas in remote district due to high transportation cost, provision is made for additional subsidy in the amended subsidy arrangement.

### 4.3.1. Subsidy Delivery Criteria

a) AEPC will approve the necessary criteria from time to time to qualify biogas companies for constructing biogas and necessary technical service based on BCC's recommendation. Whilst determining the criteria for qualifying companies for the construction of institutional or community biogas plant, additional standard will be specified for companies constructing household plant.

b) AEPC will approve the qualification of those biogas companies that have been recommended by the Implementing Agency based on pre-determined criteria.

c) Subsidy will be given only to the biogas plants constructed by pre-qualified biogas companies that adhere to the programme guidelines, approved design, and quality and warranty assurance.

d) The design, standard and implementation guideline for biogas plant, drafted by the programme Implementing Agency, have to be submitted to AEPC and will be effective after approval by AEPC.

e) AEPC will deposit the total subsidy amount for users, through company to the bank account.

f) The pre-qualified companies must submit the detail annual target to the Implementing Agency at the beginning of each fiscal year and it should submit to AEPC.

g) With the approval of AEPC, the Implementing Agency will make agreement with pre-qualified companies for the construction of biogas plants every fiscal year.

h) Pre-qualified companies should submit the forms of plant construction or repair and maintenance along with other necessary documents to the programme implementing agency. One copy of this should also be submitted to the concerned DEES/U. The programme implementing agency, after reviewing the submitted plant construction or/maintenance service completion related form, should prepare a report and to forward to AEPC with recommendation for subsidy.

i) On the basis of the recommendations of the Implementing Agency, AEPC will disburse the subsidy amount intended for the user through the pre-qualified companies by ensuring the fulfilment of all criteria for subsidy criteria.

j) After-sales service (ASS) fee and participation/promotion fee, as determined by BCC, will be deducted while disbursing the subsidy. Pre-qualified companies are required to provide ASSs two times in the two years after construction and the ASS fee will be paid to these companies only for those plants which received ASS.

k) The District Energy and Environment Units/Sections of the respective districts can also monitor whether ASS has been satisfactory or not. Besides, the DEES/U report can be considered as the basis for payment of ASS. AEPC can also investigate the cases, if a written report about an unsatisfactory ASS is submitted by DEES/U to AEPC with detail description. ASS fee will not be paid, if the service has been proved to be very poor.

l) The participation fee will be used for promotional activities (e.g. users' training, promotion, micro-credit promotion, monitoring etc.)

### 4.3.2. Basis for Additional Subsidy Delivery to Poor, Low Caste, Ethnic, Marginalized and Conflict Affected:

a) To receive additional subsidy for the poor, the user should be affiliated with the group of financial institutions, like rural development bank or following of systematic procedures of rural development bank that provide micro-credit without physical collateral. For verifications, the programme implementing agency should select qualified financial institutions as per the BCC approved standard and procedure, get prior approval from AEPC and enter into agreement. Similarly, verification for additional subsidy for poor may be arranged through Poverty Alleviation Fund (the Fund working for poverty alleviation) or other similar government promoted financial institutions or other community organizations following above-mentioned procedure.

b) Additional subsidy to low caste household will be provided to those ethnicities that belong to a caste and surname specified in the Government of Nepal's List of low caste. For this purpose, a recommendation may be sought from the National Low Caste Commission.

c) Additional subsidy for Ethnic Groups will be provided to those ethnicities that belong to a caste and surname specified in the Government of Nepal's List of Ethnic Groups. For this purpose, a recommendation may be sought from a relevant government agency.

d) Additional subsidy for depressed and conflict affected people will be provided on the basis of a certification or recommendation from the District Peace Committee or other relevant government agencies.

e) Additional subsidy will only be given to plants of 2, 4 and 6 cubic metres.

### 4.3.3. Subsidy Delivery Criteria for Institutional Biogas Plant

Subsidy will be given to public institutions such as educational institution, health institutions, police and army barracks, old-age home, orphanage for plants of 4, 6 and 8 cubic meters capacity using, in addition to cattle dung, other biomass products like human excreta, solid-waste, and loose biomass residues, which can easily be used for the production of biogas:

a) On the recommendation of programme implementing agency, the subsidy will only be given to those biogas plants with 4, 6, and 8 cubic metres that are constructed under the designs pre-approved by AEPC.

b) Applications should be submitted in the format prescribed by AEPC through Biogas Company pre-qualified for this year. A certified copy of the registration certificate (including its renewal) of the public institution as well as a copy of the decision of Executive/Management Committee should accompany the application.

c) Before giving the pre-approval for the construction of the plant, a feasibility study if felt necessary by AEPC needs to be conducted by considering its technical, financial, management and institutional capability of the plant to ensure the sustainable operation of the plants.

### 4.3.4. Subsidy Delivery Criteria for Community Biogas Plant

The subsidy will be given to public institutions after following the procedure as below to construct biogas plants that use a range of biomass products such as human excreta, solid waste, loose biomass residues etc, for the production of biogas and that distribute biogas within the technically feasible limits.

a) Subsidy will be given to biogas plants that are constructed according to AEPC's pre-approved design and based on the recommendations of the Programme Implementing Agency for the capacity of 15 cubic metres or more under a continuous feeding system with each household using a stove for a minimum of 3 cubic metres.

b) Application should be submitted in the format prescribed by AEPC through biogas company prequalified for this year with a certified copy of the registration certificate (including its renewal) of the institution or user's committee duly registered in accordance with the law of Nepal. A copy of the decision of Executive/Management Committee as well as recommendations of the concerned VDC or Municipality should accompany the application form.

c) Before giving the pre-approval for the construction of the plant, a feasibility study needs to be conducted through AEPC or AEPC designated agency by considering its technical, financial, management and institutional capability of the plant to ensure the sustainable operation of the plant.

d) The construction, operation, maintenance and ownership of such community biogas plants can be taken by a cooperative, educational institution, community based organization or private institution.

***Note:*** *Despite the provision of the subsidy in subsidy policy and the delivery mechanism, subsidy will only be available if the AEPC avails its own or any donor agency support. Concerned user shall initiate construction work only after confirming the information on whether or not subsidy is available.*

### 4.3.5. Monitoring and Evaluation

a) The field monitoring and quality control will be carried out to at least 5% of the household and institutional biogas plants after disbursement of the subsidy and at least 2.5% of the plants after getting the two and three years after sale services. At present, the field monitoring and quality control will be carried out to100% of the community biogas plants constructed as demonstration.

b) AEPC and the Programme Implementing Agency may involve a third party (independent consultant) for quality assurance and monitoring on the basis of predetermined modality.

c) If biogas construction companies do not provide ASSs, construct plants poorly (i.e. disregard specifications and standards), claim for subsidies without installing fully operational and functional plants, disregard the approved standards and procedures, or claim subsidy twice for the construction of a single plant; they will be subjected to actions including a penalty, suspension and even contract termination for such irregularities.

d) Qualified companies will have to guarantee the quality of the plant through internal quality control and monitoring.

e) AEPC will monitor and evaluate the performance of the Biogas Programme and the Programme Implementing Agency. The District Energy and Environment Unit/Section will monitor and evaluate the performance of the biogas company at district level and submit written report to AEPC for necessary action.

## 4.4. Biomass Energy Programme

The Biomass Energy Coordination Committee, under the chairmanship of AEPC's Executive Director, will advise on matters related to the proper delivery arrangements for the development of BETs, promotion of related industries and protection of interests. The other members of the Committee will comprise of representatives from the Department of Women Development, Department of Health, Department of Forest, the Social Welfare Council, Financial and Social institutions, NGO, Research Institution, the Federation of Community Forest Users Group, related networks, Renewable Energy Test Station (RETS), the Association of District Development Committees of Nepal, the National Association of VDC in Nepal, as well as biomass energy industries. The committee will advise on the necessary formulation of policies and coordinate activities with other BET concerned institutions in Nepal.

The Biomass Energy Support Programme (BESP) of AEPC will be responsible for implementation of activities related to the promotion, dissemination, and quality assurance of BETs. BESP will provide technical assistance to manufacturers, distributors, promoters, installers, users, DEES/Us and RRESCs and assist REF on technical matters related to subsidy.

The activities of the BESP will be as follows:

a) To develop quality standards to ensure the quality of BETs.

b) To ensure that the quality standards are adhered before recommending for subsidy.

c) To recommend REF to approve subsidy.

d) To strengthen the distribution network of BETs by liaising closely with relevant stakeholders and partner organisations.

e) To develop healthy and competitive BET markets and avoids the possibility of subsidy topping-up.

f) To develop, implement and strengthen procedures for the recognition of biomass companies/installers and their agents/dealers who manufacture, distribute, install, and provide ASSs, and qualify them based on the specified criteria.

g) To encourage and facilitate interactions between biomass companies, their networks and the users to ensure that users receive quality products and services at reasonable prices through competitive market.

h) To monitor the field installations in collaboration with qualified consultants, RRESCs, DEES/U and NGOs.

i) To support the human resource development of biomass companies, their networks and other relevant organisations.

j) To strengthen promotion campaigns in remote areas, especially in financially less attractive areas.

k) To develop appropriate credit mechanism to increase the accessibility and affordability of rural people to purchase BETs.

l) To encourage private companies, manufacturers, and consultants for adapting and developing feasibility studies as well as piloting other biomass solutions.

m) To conduct surveys, reviews, other studies and investigations related to BETs.

As the users of BETs are people living in rural areas, the technology should be promoted with community mobilisation and competitive marketing strategies. A minimum demand level will be considered to make ASSs available for the BETs sold in the market. BESP will mobilise the support of local government agencies for promoting BET, integrating in local planning and monitoring. BESP will collaborate with RETS or other institutions for testing and certification of BET quality standards.

Private sector companies and their networks will be responsible for the importing, manufacturing, distribution and ASSs of the biomass energy systems. Qualified Consultants will be hired to conduct Quality Assurance and Monitoring activities of BETs in the field.

### 4.4.1. Subsidy Delivery for Household Metallic Stoves for High Altitude

Subsidy for BETs will be provided to users through BET manufacturers/installers, based on predetermined criteria. BESP will appraise the application submitted in a REF specified application form and will forward it to REF with recommendations for approval. REF will ascertain whether the applications fulfil the subsidy eligibility criteria or not. If applications fulfil the necessary criteria, subsidy will be disbursed as per the stipulated mechanism.

AEPC will provide subsidy to proven metallic stoves such as improved cooking stoves with space heating applications. Users will have to contact either through qualified LPOs or in their group approach AEPC recognized manufacturers/installers, RRESC, or BESP affiliated LPOs, or DEEU/S, when requesting the installation of stoves. In coordination with district energy and environment section/unit, RRESC will collect all such requests, appraise the need for and availability of stoves meeting the need, and make recommendations to BESP for the approval to initiate promotional activities. RRESC will have specified form filled up by user and installer/manufacturer and forward to REF under AEPC for subsidy Process. All such applications have to be accompanied with an installation certificate issued by the local government institution (VDC or VDC ward office) together with the recommendation of the DEES/U chief. RRESC will also keep the DDC and VDC, District Forest Office, Women's Development Office, and the District Health Office well informed about ongoing activities and collaborate closely with them to ensure that BESP activities are firmly integrated in local planning initiatives. Once AEPC receives the application forms, BESP will then process and appraise the applications, which includes entering the data in the Biomass Energy MIS Database (BEMD), verifying the documentation and fulfilment of criteria, etc. before recommending to REF for the approval of the subsidy. The task of analysing and keeping data will be done at the RRESC and will also be sent to AEPC together with application. REF will further appraise and process the applications and the REF Executive Committee will finally approve the subsidy if all criteria are found to be fulfilled.

After approval of the subsidy, 90 percent of the subsidy will be provided to the company whilst the remaining 10 percent will be retained as ASS guarantee money, which will be released after evaluation of the promised ASS a year later. REF will require an all documents related to "Advance Payment" bank guarantee in a specified format from the manufacturers/installers before providing the subsidy against the bank. An appropriate monitoring mechanism will be developed with the active participation of the local government and stakeholders at the central and district levels for monitoring of ASSs quality.

**Criteria for Subsidy**

Following terms and conditions must be met for subsidy:

a) The subsidy will be available to rural households for metallic stoves that meet all the specified technical standards.

b) Subsidy for high altitude metallic stoves will be available only in specified VDCs intersected by and above 2000 metre contour lines in altitude. As for houses facing North, houses or families of VDCs at altitudes of 1500 metres and above will also

receive subsidy. Determination of such places will be done through the help of Topo Maps or by the AEPC.

c) Subsidy for high altitude metallic stoves will be available in an area or cluster that has more than 10 metallic stoves installed by a recognised company/installer. The area or cluster should be defined, in general, as a VDC or a group of adjoining VDCs within 3 hours' walking distance of each other. The distance between VDCs has to be certified by one of the concerned VDCs or DDCs.

d) Recognized installer/company and their corresponding agent/dealer must install the stoves with certified designs. AEPC will certify the design.

e) The installer/company must ensure necessary ASSs in the region.

f) The subsidy request must be made in the specified REF application form, with recommendation from a local body/District Energy and Environment Unit/Section.

### 4.4.2. Household Gasifier (Modern Stove)

The companies qualified by AEPC will have to submit duly filled up application form for the household gasifier system (modern stove) to AEPC/BESP along with a covering letter. The companies will have to make available electronic copies of subsidy application form and data by using the prescribed software. After receiving the application, BESP will appraise applications to verify fulfilment of criteria/condition and documentation prior to recommending to REF for approval of the subsidy. REF will further appraise the submitted application forms and submit to the REF Executive Committee for the approval of subsidy. After approval, 90 percent of the subsidy amount will be disbursed to the company, while the balance 10 percent will be retained as a guarantee amount for after sales service (ASS) warrantee. This will be released on the basis of evaluation of ASS after a year.

### Criteria for Subsidy

The following conditions will have to be fulfilled for the subsidy:

a) Subsidy will only be available to Nepalese citizens for specified household gasifier (HHG) system installed in the rural areas where there is no other subsidy available for cooking stove such as the subsidy of Government of Nepal on biogas or metal stove.

b) The qualified companies and their agents/dealers must install the HHG with certified model. In order to ensure the quality, only RETS certified specified standard shall be used.

c) The subsidy will be available only there are more than 10 HHG systems installed within one area or cluster by the qualified company/installer for the first time. Such area or clusters is defined in general as a VDC or a group of adjoining VDCs within 3 hours of walking distance.

d) Installation of HHG system must only be done by a certified technician/installer of qualified companies and their representative or dealer.

e) Qualified companies must provide adequate ASS at the site and REF prescribed form must be filled up at the installation site.

f) The subsidy request must be made by filling up the REF prescribed request form.

g) For HHG, the application form must include a copy of the user's citizenship certificate and one photo of the house where the system is installed. The photo must clearly show the user and the installer together with the house in the background.

### 4.4.3. Institutional Gasifier (Modern Institutional Stove)

The companies qualified by AEPC will have to submit duly filled up application form for the institutional gasifier system (modern stove) to AEPC/BESP along with a covering letter. The companies will have to make available electronic copies of subsidy application form and data by using the prescribed software. After receiving the application, BESP will appraise applications to verify fulfilment of criteria/condition and documentation prior to recommending to REF for the approval of the subsidy. REF will further appraise the submitted application forms and submit to the REF Executive Committee for the approval of subsidy. After approval, 90 percent of the subsidy amount will be provided to the company, while the balance 10 percent will be retained as a guarantee amount for after sales service (ASS) warrantee. This will be released on the basis of evaluation of ASS after a year.

**Criteria for Subsidy**

The following conditions will have to be fulfilled for the subsidy:

a) Subsidy will only be available to Nepalese citizens for specified institutional gasifier system installed in the rural areas where there is no other subsidy available for cooking stove such as the subsidy of Government of Nepal on biogas or metal stove.

b) The qualified companies and their agents/dealers must install institutional gasifier with certified model. In order to ensure the quality, only RETS certified and with specified standard shall be used.

c) Installation of institutional gasifier system must only be done by a certified technician/installer of qualified companies and their representative or dealer.

d) Qualified companies must ensure availability of adequate ASS at the site and REF prescribed form must be filled up at the installation site.

e) The subsidy request must be made by filling up the REF prescribed request form.

f) For institutional gasifier system, the application form must include a copy of the user's citizenship certificate and one photo of the house where the system is installed. The photo must clearly show the user and the installer together with the house in the background. Subsidy will be available to social and religious institutions such as school, barrack, temple, monastery, church, mosque, etc, based on the application together with registration certificate of such institutions, decision of executive committee and recommendation of the concerned VDC.

### 4.4.4. Monitoring and Evaluation

a) Approximately 10 percent of installed stoves (gasifier and metallic stove) will be randomly monitored in the field a year after the installation. The staff of AEPC or

RRESC and DEES/U will carry out the field monitoring of these randomly selected stoves. The Programme will only use trained and qualified technicians for the field monitoring work.

b) Data obtained in a standard format from the monitoring of installed will be entered into BEMID and analysed. The findings of these analytical reports will be available to installers/companies as performance evaluation and feedback. The data will also be used to impose penalty for not providing ASS, using faulty and low quality material and equipment and claiming double subsidy or for other irregularity, etc. The maximum limit of penalty will be disqualification of the company and the basis of which will be determined. Such criteria will be revised as required in future based on experience.

c) Besides, staff of AEPC and its programs will carry out field monitoring and testing regularly or on the basis of complaint or information of irregularity. In addition, BESP will collaborate with RETS or other suitable institution for carrying out detailed technical measurement and investigation of BETs in the field. The field investigation reports will be circulated to the respective companies as a feedback for necessary improvement.

## 4.5. Improved Water Mill Support Programme (IWMP)

A Management Committee comprised of AEPC's Executive Director as the chairperson and representatives from the programme implementing agency and relevant donor representatives will ensure the overall coordination, guidance, and monitoring of the IWM Programme's activities. A Technical Committee (TC) with representatives from AEPC, Mini-Grid Support Programme (for Water Mill electrification) and the programme implementing agency, will support the Management Committee on technical aspects.

### Subsidy Delivery and Criteria

The modality and subsidy delivery of IWMP will be as follows:

a) A Committee, comprising of representatives from the programme implementing agency and AEPC, will prepare the qualification guidelines for IWM service centres, manufacturers and independent consultants to verify availability of ASS. AEPC will qualify the service providers based on the Committee's recommendation. AEPC may also qualify Ghatta (Mill) Owners' Association as a service centre.

b) The interested water mill owners, who want to install the IWM, should apply through a Ghatta Owners' Association (GOA) along with the GOA recommendation if it exists in their district or if not approached a qualified Service Centre and fill up the prescribed application from.

c) All the necessary documentation including a copy of membership of the Ghatta Owners' Association should be submitted along with the application form. A separate application form should be completed and submitted, in case of installing a new IWM.

d) The service centre should submit a complete installation report to the Implementing Agency. In addition, the service center should also submit a copy of completion report to the District Energy and Environment Unit/Section (DEEU/S).

e) The Implementing Agency should study the installation completion report and, after inspecting at least 15% of the installed Water Mills as per prescribed norm, should forward a recommendation to AEPC for the approval of the subsidy. AEPC will then appraise and evaluate all the documents and if it is ensured to have fulfilled all the stipulated criteria, it will approve the subsidy and provide 90 percent of the subsidy to the mill owner through pre-qualified IWM service centre and kit manufacturer. The remaining 10 percent of the subsidy amount will be released to the service centre or manufacturer after the one-year guarantee period on recommendation from a pre-qualified consultant based on the study.

f) Service centres should provide owners with a Mill Owner Manual for Repair and Maintenance after installation of the IWM.

g) Service centres and manufacturers should provide mill owners with a one-year guarantee for the installed IWM. During the guarantee period, if there is any problem related with the installation, the service centre and manufacturer should provide repair and maintenance service, and if manufacturing defects are detected, the manufacturer should rectify the defect or replace the defective IWM component. The 10 percent retention subsidy amount will be released only after providing satisfactory ASS for one year.

h) Service centres should only use IWM kits developed/manufactured by a pre-qualified manufacturer.

i) Special preference will be given to remote and extremely remote areas for the installation, improving of existing water mills and water mill electrification.

j) If the water mill owner wants to install IWM for electrification, the water mill electrification implementation guideline and standard should be followed.

k) AEPC will formulate and approve the implementation guidelines and standard for Programme's effectiveness.

**Monitoring and Evaluation**

a) After improvement and installation of water mills, technicians from AEPC or the programme implementing agency will inspect at least 10 percent of IWMs for quality assurance and monitoring. However, in the event of having installed less than 10 IWMs, then all the installed IWMs will be inspected for quality assurance.

b) AEPC will monitor and evaluate the performance of the Programme and the Programme Implementing Agency.

## 5. Subsidy Criteria and Delivery Mechanism: Rural Electrification

The arrangement has been made to provide the direct and indirect subsidy through the Energy Sector Assistance Programme currently being supported by Governments of Nepal, Denmark, Norway and Germany to promote the rural electrification through solar energy systems and mini grid electrification system as per subsidy for Renewable (Rural) Energy Arrangement 2066. Similarly, the Rural Energy Development Programme (REDP) supported by the World Bank and the United Nations Development Programme

(UNDP), is supporting community micro hydro as the entry point in 40 districts of Nepal to strengthening the community programme.

### 5.1. **Solar Home System** (Including Small Solar Home System)

A Solar Energy Coordination Committee, under the chairmanship of the Executive Director of AEPC will be established to coordinate, networking, and advice on issues related to the development of rural electrification by means of solar energy in Nepal. Other members of the Committee will be representatives from: Ministry of Environment, AEPC, ESAP, Solar Electric Manufactures' Association Nepal, Renewable Energy Test Station, other ongoing solar programmes, academic institution, as well as the financial institution. The coordination Committee will advise the Solar Energy Support Programme (SSP) on policy formulation, coordination, and networking.

SSP will be responsible for matters related to the implementation activities such as promotion, dissemination, quality assurance and monitoring of solar energy systems. Its main objective will be to provide technical assistance to SHS and SSHS manufacturers, distributors, and users and to assist REF on technical issues related to subsidy delivery. As users of SHS and SSHS are in rural areas, SSP will play a supportive role in promoting solar energy through competitive markets.

The activities of SSP will be as follows:

a) To develop healthy markets for SHS and SSHS and to avoid the likelihood of subsidy topping-up by collaborating with relevant stakeholders and partner organizations and to strengthen the distribution networks of SHS and SSHS.

b) To develop and implement criteria and procedures for the pre-qualification of solar companies and their agents/dealers responsible for the manufacturing, distribution, installation, and ASS of SHSs and SSHSs, and qualify them based on the criteria and undertake periodic review.

c) To inspect SHS as per AEPC approved standard and select consultants.

d) To facilitate interactions between solar companies, their networks and users to ensure that users are getting quality product and service at reasonable price through competitive market.

e) To support the human resource development of solar companies, their networks and other relevant organisations.

f) To establish the quality standard for solar energy system components and update it regularly as the technological advancement.

g) To undertake filed monitoring in collaboration with qualified consultants, RRESC, DEES/U, GO and NGOs.

h) To formulate an appropriate credit mechanism to increase the rural people's accessibility, and affordability to install SHS.

i) To facilitate activities related to Used Battery Management.

j) To conduct promotional campaign in financially less attractive and remote areas.

k) To conduct survey, reviews, and study related to solar energy.

Renewable Energy Test Station (RETS), private sector companies and their networks will jointly be responsible for laboratory testing of the materials and equipment used in SHS and SSHS. With regards to SHS, RETS will certify whether Nepal Photovoltaic Quality Assurance (NEPQA) have been complied with or not. Related solar companies should test the SHS materials and equipment from RETS and the REST shall conduct sample test of SSHS and make available the Design and Product Approval Certificate. The companies should sale and distribute only these certified materials and equipment. AEPC will take action and disqualify the companies, if the companies sale and distribute prior to certification from RETS or brought to the local market. Similarly, Council for Technical Education & Vocational Training (CTEVT) will assist in skill test certification of solar energy technicians of levels I and II.

Private solar companies and their networks will be responsible for the importing, manufacturing, distribution and ASSs of the materials and equipment related to solar system. The concerned companies should pay necessary fee to RETS related to quality testing and certification.

### 5.1.1 Subsidy Delivery-Solar Home System

Solar companies pre-qualified by AEPC will have to submit specified application form by AEPC with a cover letter for SHS subsidy. The companies should also provide electronic copies of data and the subsidy application form by using prescribed software. After receiving the application, SSP will check, analyse and evaluate the basis/condition and documentation for subsidy approval and will recommend to REF for the approval of subsidy. REF will further appraise and process the applications and if everything is found to be in order, the REF Executive Committee will approve the subsidy. After approval, 90 percent of the subsidy to be given to user will be provided through the company whilst the remaining 10 percent will be retained as an ASS guarantee. This will be released on the basis of the evaluation of the ASS.

### Criteria for Subsidy

For the subsidy, a SHS must comply with the following conditions:

a) Subsidy will only be available to Nepalese Citizens for specified SHS in areas not electrified by other means.

b) Installation of SHS must be done by pre-qualified companies and their recognised agents/dealers using certified materials and equipment only. In order to ensure quality, only materials and equipment certified by RETS shall be used.

c) The certified technicians passed at least Level I by Council of Technical Education and Vocational Training can only install the SHS.

d) Pre-qualified companies must ensure the adequate ASS in the field and the REF prescribed ASS form should be completed at the installation site.

e) The subsidy request must be made by filling up REF's prescribed request form.

f) The SHS application form must be submitted along with a copy of the user's Citizenship Certificate and two photographs of system installed house. The first photograph should clearly illustrate in full view of the solar panel installed in the house, specifically with a proper angle to demonstrate the front view of the panel.

The second photograph should show the user and the installer together with the house in the background.

### 5.1.2. Subsidy Delivery - Small Solar Home System (Solar Tuki)

Subsidy for SSHS of minimum 5 watt peak with two sets of lights will be according to the subsidy for solar lamps (tuki) as defined in the Renewable (Rural) Energy Subsidy Arrangement 2066.

Pre-qualified companies will have to submit applications for SSHS (Solar Tuki) with a cover letter to AEPC along with necessary recommendation from DEES/U. After receiving the application, SSP will process and appraise the application and documentation before recommending to REF for the approval of subsidy. REF will further appraise and process the applications and if everything is found to be in order, the REF Executive Committee will approve the subsidy. After approval of the subsidy, 90% of the subsidy amount will be provided to company. The retained 10% subsidy amount would be released a year after and upon evaluation of the company's performance. The concerned company may claim an advance payment of the retained amount against a Bank Guarantee.

**Criteria for Subsidy**

For the subsidy, a SSHS must comply with the following conditions:

a) Subsidy will only be available to Nepalese Citizens for specified SSHS installed in areas not electrified by other means.

b) Installation of SSHS must be performed by pre-qualified companies and their recognised agents/dealers using certified materials and equipment. In order to ensure quality, only materials and equipment certified by RETS shall be used.

c) Pre-qualified companies must ensure the adequate ASS at local level. For this, they will either be required to establish an office capable of providing maintenance service at the district headquarters where the SSHS is sold or have a written agreement with established office/entrepreneurs.

d) The subsidy request must be made by completing a prescribed REF request form. At present, arrangement is made to submit a recommendation from the VDC/Ward, evidence of receipt of the materials purchased/received, recommendation of DEES/U and certification by the company in a prescribed user's application.

**Process for Requesting Subsidy**

a) The prescribed subsidy application form and recommendation form will be available to the qualified companies.

b) The household willing to install SSHS should submit the subsidy application form and recommendation form to the VDC/Municipal Ward office.

c) After appraising and verifying the details submitted by the applicant, the concerned VDC/Ward Office will make recommendation stating "To Whom It May Concern"- for subsidy, declaring the applicant's eligibility for purchasing the SSHS.

d) After getting the recommendation of the VDC/Ward Office, the company will have to make SSHS available to the user. The concerned company should submit that form together with details of the system, the subsidy application, the recommendation of VDC/Ward, and the acknowledged receipt of the system by the user to the DEES/U.

e) DEES/U should, after necessary examination and recording the information mentioned in the subsidy application and recommendation form submitted by the company submit to AEPC through the related company.

f) The qualified company should submit application and recommendation from duly signed by its staff and containing the company seal to AEPC for delivery of subsidy together with DEES/U recommendation, receipt of system by the user, details of the sold system, VDC/Ward recommendation and application of user submitted to VDC/Ward. At least 20 forms should be submitted at once while submitting application.

g) After necessary examination of the submitted application, the details contained on the application will be put in a database and the SSP will recommend to REF for subsidy delivery.

h) REF will provide subsidy to the user through the concerned company.

### 5.1.3. Monitoring and Evaluation

**Solar Home System (SHS)**

a) After a year of the subsidy delivery, at least 10% of all the installed SHS will be randomly sampled and verified in the field by qualified consulting institution. These samples will be selected from a computerized database of the Solar Energy Management Information System. Only technicians trained by AEPC and qualified technicians will be eligible to conduct the field verification.

b) The verification data received from the field will be assessed after putting in the Management Information System database and it is used as the basis for evaluation of the performance and grading of the solar companies. The data will also be used for imposing fines against non-performing ASSs, the use of defective and low quality materials and equipment, and the double claiming of subsidy as well as other irregularities. The maximum limit of fine/penalty would be disqualification of the company. In addition to the field inspections by qualified consultants, AEPC staff and staff under its programmes will conduct field verification and examination regularly and as per need.

c) RETS will also conduct field study and research in all technical aspects of SHS and SSHS and the report will be available to the concerned companies as feedback for necessary improvement.

**Small Solar Home System (SSHS)**

Record of SSHSs that have received REF subsidy will be maintained at AEPC. Based on these records, field study will be conducted to determine the impact of SSHS installed in different parts of the country in different times on users and field monitoring will also be carried out with support from district-based DEES/U, VDC office, the regional renewable

energy service centres, and other government and non-government organizations as needed. AEPC will arrange the special monitoring, if it is found through verification that any standard has not been complied with or subsidy is claimed without installation or any specific complaint stating such facts is submitted to AEPC. If proven through the verification, action will be taken against the concerned company. The extent of such action will be as per the standard determined by AEPC in coordination with concerned stakeholders.

## 5.2. Mini and Micro Hydro Projects

Under mini and micro hydro, subsidy will only be provided to projects up to 500 kW. A Technical Review Committee (TRC) under the chairmanship of the AEPC will evaluate the technical and financial feasibility studies of mini and micro hydro projects under AEPC. This committee will ensure the proposed mini and micro hydro with technically, financially and economically and socially feasible and recommend for subsidy approval to REF established at AEPC and District Energy Fund. The Committee will be comprised of a technician each from AEPC, and mini and micro hydro programs under AEPC (MGSP, REDP) and one representative each from private and financial sectors involved in the development of micro hydro.

For initial project activity such as feasibility study of mini and micro hydro projects, partial financial support will be provided in the following manner.

| Place | Financial Support to be provided for Detail Feasibility Study (in Rs.) | | | |
|---|---|---|---|---|
| | 5 to 25 kW | 26 to 50 kW | 51 to 100 kW | 101 to 1000 kW |
| Very Remote Districts | 70,000 | 85,000 | 100,000 | 300,000 |
| Other Districts | 60,000 | 75,000 | 90,000 | 280,000 |

50 percent of the support will be provided on recommendation of DEES or RRESC after completion of detail feasibility study and submission of report, and remaining 50 percent will be provided after approval of the TRC. For survey, such support will only be given to community project and such support will be based on demand. In order to ensure the quality of operational projects, AEPC may provide necessary technical guidance.

For all projects operating under AEPC, the report of POV, done in prescribed format by independent consultants after construction, shall be submitted to TRC. After that, with recommendation of the TRC, related program may approve and release the disbursement.

*Note: For economic support for feasibility study, Humla, Jumla, Kalikot, Dolpa, Mugu, Rolpa, Rukum, Jajarkot, Bajhang, Bajura, Accham, Dailekh and Darchula districts will be considered as very remote districts.*

### 5.2.1. Mini Grid Projects of Energy Sector Assistance Programme

A Mini Grid Coordination Committee (MGCC) under the chairmanship of the AEPC ED will carry out the activities related to programme coordination, networking between relevant institutions, policy formulation and advice. The Committee will comprise of

representatives from Ministry of Environment, the Mini-Grid Support Programme (MGSP), the Rural Energy Development Programme (REDP), Nepal Electricity Authority, the Department of Electricity Development, the Association of District Development Committee of Nepal (ADDCN), the National Association of Village Development Committee in Nepal (NAVIN), the Ministry of Local Development, RRESC, the Association of Micro-hydropower Developers, and the micro-hydropower industry. Where needed, AEPC may invite other relevant institutions at the meeting as observers. The Committee will provide recommendations to MGSP on issues pertaining to operational, and work-plans. MGSP will carry out the day to day management responsibilities of the Mini Grid Electrification Component.

The major activities of the MGSP will be as follows:

a) To qualify consultants, manufacturers and installers responsible for project survey and inspection, equipment manufacturing, and construction and installation.

b) To establish RRESCs for providing facilitation support to mini-grid schemes covering all the potential areas of the country.

c) To prepare guidelines for the integration of rural electrification activities in the local planning of DDCs and VDCs.

d) To prepare procedural manual/guideline and standard for the identification, survey, design, construction, installation, verification, interconnection and grid connection and also prepare model bidding and contract agreement documents.

e) To support preparatory studies (reconnaissance studies including GIS-based carpet identification and pre-feasibility studies), feasibility studies and project planning by qualified local experts. Also, local NGOs will be mobilised to facilitate these activities.

f) To develop an appropriate mechanism for improved hydrological documentation for schemes of more than 50 kW capacity to reduce the hydrological risk associated with the mini and micro hydro investment.

g) To operate and support operation of mini-grid schemes, assist in the establishment of the electricity developers, electricity users' cooperatives, and social organizations.

h) To facilitate increased in the public and private sector participation in identification, implementation and operation of projects and end-use of electricity.

i) To implement quality assurance system and assist other stakeholders in establishing internal quality assurance system.

j) To make necessary arrangements for human resource development of staff of financial institution, private sector companies, non-government organizations, and mini-grid developers, operators, managers, cooperatives and potential and already involved users in mini-grid development.

k) To provide technical backstop and other support for sustainable operation of micro and mini-hydro projects, particularly in remote areas through establishment of RRESC.

l) To conduct promotional activities, information dissemination, and market expansion related activities for increasing the productive use of electricity.

RRESC will actively promote the productive end-use of electricity and work towards meeting the objective of ensuring financial sustainability. RRESC and DEES/U will also appraise pre-feasibility studies of the projects. While doing so, RRESCs should compulsorily coordinate with DEES/Us.

Qualified service providers from the private sector will be entrusted with preparatory (identification and verification) as well as feasibility studies. The manufacturing of equipment, supply and installation will be carried out from qualified manufacturers, suppliers, and installation/construction companies. The format of contract between the qualified companies and the mini-grid developer must be based on standard contracting practices such as EPC, turnkey contract, etc.

International and the existing government bidding practice will be adopted for schemes greater than 100 kW and for the schemes to be grid connected and inter-connected. Any private or public company, cooperative and other entity recognised by the law of Nepal may become a mini-grid developer and assume ownership of the project. However, company registration is not required for projects in Pico range (i.e. up to 5 kW). The community/individual entrepreneur must ensure an equity contribution and the smooth operation of the project.

MGSP will seek support from the local government (DDCs and VDCs) to ensure that Mini-Grid schemes are integrated in the planning processes of the local government and that such projects secure water rights and ensure the services to target households. The concerned DDC will have to certify the distance for calculating the transport subsidy.

**Subsidy Delivery**

In order to have a simple and transparent subsidy delivery mechanism and to fulfil the objective of subsidy, subsidy delivery for micro and mini hydropower projects will be as follows:

**a) Project electrifying up to 40 new households and as community or institutional project (up to 5 kW):**

The project proponent shall select the company from among the pre-qualified companies for survey, supply of material and installation. The company must complete the installation work based on AEPC guidelines and adhere to the published standards. The company should obtain recommendation regarding the installation of physical condition from DEES/DEEU/RRESC and should also provide information about installation to MSGP via DEES/DDEU/RRESC prior to installation. The company must submit documents and details to MGSP after completing the installation and power output test (POT). MGSP shall assess the project documents and will recommend to REF for subsidy. Such project will have to be recommended to MGSP along with necessary verification by RRESC or DEES/U.

In case of electrification from Improved Water Mill, subsidy request to MGSP shall be made by qualified company through the IWM Implementing Agency after completing the installation and POT, along with the survey/design and estimation, based on agreed standard/guideline. The IWM Implementing Agency will assess and verify the commissioning of the project. MGSP will assess the project completion document and details, and recommend to REF for the subsidy.

After receipt of the recommended projects, REF will ascertain whether or not the basis of subsidy are completed and approve the subsidy. After the completion and approval of the project, 90 percent of the subsidy amount will be provided to the company and the remaining 10 percent amount will be retained as a guarantee against ASS. This guarantee amount will be released on the basis of evaluation of the compliance with ASS conditions after one year.

The proposed institutional entities for electrification such as shelters, temples, monasteries and other religious places, community radios, and hospitals should have permanent physical structures.

**b) Mini-Grid Project electrifying more than 40 new households (Above 5 kW-up to 500 kW):**

Depending on the size of the project, the project cycle includes project identification, integration in local planning, feasibility study by qualified companies/consultants, and appraisal of the feasibility study by the MGSP and TRC. If it is found appropriate, the mini-grid developer will have to apply for subsidy to REF in the prescribed form along with the recommendation from the TRC.

REF will decide on the eligibility for subsidy based on prescribed criteria. Where necessary, REF may award a conditional approval (valid only for up to 6 months) to facilitate the financial institutions' procedure of loan processing. REF will only give the final approval if it is satisfied that all the arrangements like equity investment, loan, and the contract agreement between the mini-grid developer and the constructing/installing company fulfil the subsidy criteria. If necessary, REF may seek support of MGSP for assistance to appraise the proposed project.

In order to arrange the financial cost of the project, REF will disburse as follows:

- **First Installment:** 30 to 60 percent of the estimated subsidy amount will be released to the project developer against an Advanced Payment Bank Guarantee (APBG) after final approval from REF upon submission of the agreement made between qualified project installer and operator and other necessary documentation with proof for subsidy. The intended percentage of advance payment by the installer should be clearly mentioned in the agreement. The bank guarantee should be in the REF prescribed format if the installation company and the project developer intend to get advance payment for first instalment. The bank guarantee for advance instalment will be returned after supply of material and equipment to the project site and upon hand-over of material to the developer as per the agreement. The APBG paper shall be valid for a minimum of 6 months to 1 year.
- **Second Instalment:** The manufacturer/installer will get payment of up to 80 percent of the subsidy amount after a handover of project and upon household connection certification by local government covering electrification of at least 75 percent of target households, successful test run for the prescribed period depending on size of the scheme, submission of the commissioning and the Power Output Test (POT) reports in a prescribed form.
- **Third Instalment:** REF will release 10 percent amount after Power Output and Household Connection verification. In the event REF has not conducted the Power Output and Household Connection Verification (POHHV), installer can request this 10 percent as advance payment against APBG. After the approval of reports of Testing Commissioning of the project and POV test from MGSP, the installer company may

request for POHHV. Prior to making such request, the installer company has to ensure uninterrupted operation of the project. REF has to undertake POHHV in an appropriate season within 1 year of receipt of such a written request for POHHV.

- **Final Instalment:** Remaining 10 percent amount will be released after one year from the date of project hand-over and upon verification of the quality of equipment, ensure of ASS quality and electrification of the remaining 25 percent of households . Also, that 10 percent amount may be requested as advance payment against APBG.

**Subsidy Criteria**

The micro and mini hydropower projects will have to fulfil the following criteria in the project proposal and commit to their implementation and operation accordingly:

**a) Project electrifying up to 40 new households and as community or institutional project (up to 5 kW):**

i. The Projects must only be constructed by a qualified company/contractor.

ii. The commissioning and POT reports submitted by a qualified company/contractor have to be certified by MGSP.

iii. The installation company should submit the name list of electrified households and household electrification has to be certified by the VDC/local government/school and one copy of this should be made available to concerned DEEU/S.

iv. The subsidy request must include a copy of citizenship of at least one user member involved in the project.

v. Recommendation from the VDC/DDC on water rights must be submitted for subsidy application.

vi. The project proposal must include the distance certificate from the DDC. Prior to subsidy disbursement, REF can verify or have verified the distance certification. For determining the transportation subsidy for eligible projects, no more than 8 households per kW has been considered. For the purpose of the transport subsidy, 1 *Kosh* (two miles) will be considered equivalent to 3.2 km. The transport subsidy will be calculated on the basis of additional km beyond 10 km.

vii. Necessary document like VDC recommendation, institutional decision, measurement and details of energy consumption by building/electrical equipment should be submitted as the justification of electricity demand for institutional structures.

viii. **Warranty Period:** The supplier/installer should give a warranty of minimum 1 year on electrical and mechanical equipment of pico hydro project. The provision related to this has to be clearly mentioned in the contract agreement signed by developer/installer/supplier and pico hydro operator. During the warranty period, the installer/supplier must make one routine check of the scheme and give suggestions to the developer for further improvement in operation and management. The supplier/installer will be responsible for rectifying any problems surfaced due to poor workmanship, material and supervision.

**b) Mini-Grid Project electrifying more than 40 new households (above 5kW and up to -500 kW):**

i. The proposed project must have acquired a legal status with registration in the concerned agency.

ii. The proposal must include a feasible business plan and a detailed project design addressing community and environmental aspects. .

iii. For the proposed project up to 100 kW, the project proposal must include the water-rights certificate from the DDC (District Water Resource Committee).

iv. The project proposal must include distance (from the nearest motorable road to the project site) certificate received from the DDC. For determining the transportation subsidy for all eligible projects, 8 households per kW has been considered. For the purpose of the transport subsidy, 1 *Kosh* (two miles) will be considered equivalent to 3.2 km. The transport subsidy will be calculated on the basis of additional km beyond 10 km.

v. Feasibility studies of projects up to 100 kW must be done by companies pre-qualified by AEPC. For projects of 100-1000 kW, the feasibility study may be commissioned through registered companies as stated in the guideline. The feasibility study of the project should be conducted only after getting approval from MGSP's.

vi. Project proposal and report must be recommended by MGSP and TRC.

vii. The proposed tariff plan must be able to meet operational cost (staff salary, regular maintenance and improvement, etc.) along with setting aside at least 20 percent of the revenue collected for major repair and maintenance.

viii. The project proposal must include the evidence of bank deposit in the project account with mechanism to prevent fund withdrawal for other purpose as a guarantee of equity finance, and a loan approval document. In the event of financial support from local government, a letter to that effect shall be submitted. For the support or investment from agency other than the local government agency, a written memorandum of understanding should be done with AEPC.

ix. The net present value of the actual cash flow of the project, after a repayment of loan at an annual interest rate of 6 percent, must be positive.

x. The contract agreement for construction of projects up to 100kW must be done with qualified contractor/companies and such agreement must at least include provisions specified by AEPC in the sample contract agreement. In case of projects of 100-1000kW, the contract agreement for project construction may be done with companies recognized by national and international law in accordance with contracting procedure.

xi. Additional conditions for isolated mini-grid schemes not to be connected to regional or national grid

- Business plan of the project must demonstrate a commitment to use at least 10 percent of the available electricity for productive end-use.

xiv. Additional conditions for projects to be connected to regional or national grid:

- A copy of Power Purchase Agreement with the grid operator/distributor has to be included.
- Subsidy calculation will be determined based on the number of households not served by the national or regional grid and to be directly connected by the proposed project.

xv. Additional conditions for generation of additional electricity in the area already electrified by the Community Rural Electrification Programme.

- Subsidy calculation will be determined based on the number of households not served by the national or regional grid and to be directly connected by the proposed project.
- Business plan should include audited financial statements.
- A copy of Power Purchase Agreement with the NEA/Grid operator has to be included.

xvi. Additional conditions for rehabilitation projects: Existing micro-hydropower schemes that are functioning below the normal capacity or are not functioning at all, can receive subsidy for rehabilitation to increase their power production and to connect new and old users. Eligibility criteria for selecting micro-hydropower schemes for rehabilitation include the following:

- Scheme size must be above 5 kW.
- The scheme must be older than 10 years from the date of operation. Only schemes fully handed-over by NEA to user groups will be eligible for rehabilitation subsidy. But, projects damaged by natural disasters (such as earthquake, land slide, flood, etc) will be eligible for subsidy as rehabilitation projects. Such projects will be dealt with on a project-to-project basis after an evaluation of the damage has been conducted by a technical committee formed by AEPC. For projects damaged by natural disasters, the provision of project to have 10-year old will not be applicable. But, such projects will have to be recommended by the concerned DDC.
- Projects damaged by natural disasters will normally be eligible for subsidy as rehabilitation projects. However, such projects will be dealt with on a project-to-project basis after an evaluation of the damage has been conducted by a committee formed by AEPC. If the damage is severe, the projects can be considered as new projects.
- Only schemes fully handed-over by NEA to user groups will be eligible for rehabilitation subsidy.

xvii. Power Output and Household Connection Verification (POHCV): With the given head and flow, the actual power output should not be less than the designed output in any case. POHCV will be as per REF's guideline. If the actual power generation is less than designed capacity, or in case of irregularity due to carelessness of the manufacturer/installer/supplier, the amount of the reduced kW will be deducted at the cost rate determined/approved by REF and deducted from the third and/or fourth instalments to be paid to the manufacturer/installer/supplier.

xviii. Warranty Period: The supplier/installer must provide at least one year's warranty on the electromechanical equipment of the micro-hydropower Scheme. Such provision has to be clearly mentioned in the Contract signed by the manufacturer/supplier/installer and the developer. During the warranty period, the installer/supplier must do two routine checks of the scheme and give suggestions to the developer for further improvement in operation and management. The supplier/installer will be responsible for rectifying any problems arising from poor

workmanship, material and supervision. The developer will be responsible for problems that are caused by negligence on the part of the operator and manager.

xviv. Productive End-use: Following will be the criteria for productive end-use.

- This will only be applicable to new projects constructed under the current subsidy policy.
- As for other provisions, the guideline related to providing such financial support will be enforced after formulating by AEPC.

**Monitoring and Evaluation:**

a) REF will undertake power output and household connection verification of 25% of the total projects up to 5 kW hydropower projects electrifying up to 40 new households company-and-area-wise, and all larger projects.

b) Impact assessment will be carried out through an independent consultant /institution on an annual basis. Such assessment will assist in directing programme and subsidy delivery mechanism towards a right direction. The finding of the assessment report shall be presented to Mini Grid Coordination Committee, the ESAP steering committee and the review mission conducted by the GoN and participating donor agencies.

c) Public hearing will be organized prior to construction of the project. RRESC will be responsible for facilitating such hearing and the representative of district energy and environment section/unit will compulsively participate in such hearing.

d) Studies on consumer satisfaction and operational performance of the project will be conducted on an annual basis.

### 5.2.2 Micro Hydro Projects of Rural Energy Development Programme

Executive Director of AEPC will be the National Programme Director (NPD) of REDP and there will be a Programme Management Committee (PMC) under his Chairmanship. The PMC will approve the annual work plan including the approval of all micro-hydropower projects, prepare and approve the implementation guidelines, provide comment on the audit reports, advise on policy matters, review progress as well as carry out other activities related to programme management . The PMC will have representatives from the National Planning Commission, the Ministry of Finance, the Ministry of Local Development, the District Energy Network, Association of District Development Committee of Nepal (ADDCN), National Association of Village Development Committee (NAVIN) and REDP. Similarly, there will be a provision of a Project Executive Board to generally undertake quarterly programme review, approve work plan and provide direction and advice to the programme management. The Board will compose of the ED of AEPC, Assistant Resident Representative of UNDP and representatives from the Ministry of Finance, ADDCN and NAVIN.

The following activities will be under REDP:

a) The programme will support the DDC through AEPC to establish and strengthen the DEES/U.

b) The Programme will support the DEES/U to prepare district energy and environment situation study report and district-level energy plan form local level to promote decentralized rural energy technologies at the community level.

c) The Programme has taken up social capital building initiatives as the main activity through mobilising rural communities for the planning, implementation, and sustainable operation of rural energy system.

d) Taking up micro-hydropower as the entry point for community development and in accordance with the holistic development approach, the programme will focus on the promotion of rural energy technology, institutional development and capacity development at different levels, whilst other RETs will be considered as complementary.

e) Promote the multiple uses of water resources through integrating micro-hydropower scheme with irrigation and drinking water projects.

f) Support the development of institutions and human resources at various levels, promote end-use, promote electricity based micro-enterprises and other income generating activities and support the adaptation, transfer and internalization of efficient technology.

g) Develop detail rural energy demonstration package with emphasis on people participation from the planning phases to the implementation, operation, and sustainable operation and management.

h) Strengthen the coordination, planning, resource mobilization and implementation, and monitoring and evaluation of rural energy activities through institutions such as District Energy Committee (DEC), District Energy and Environment Management Committee, District Energy and Environment Section (DEES), Rural Energy Service Centre (RESC), District Energy Fund (DEF) and support organisation (SO).

**Subsidy Delivery**

a) The feasibility study and design of micro-hydropower schemes with expected power output of less than 20 kW will normally be carried out by REDS itself, while the feasibility study of schemes with expected power output of more than 20 kW will be commissioned through experts of consulting firms qualified by AEPC.

b) The subsidy for the use of micro-hydro scheme will be channelled to the DEF from AEPC or REF based on the endorsement by the PMC, and DEF will channel it to the Community Energy Fund (CEF) upon fulfilling the following necessary criteria:

**c) Procedure for transfer of fund from DEF to CEF:**

- DDC and the Micro-Hydro Functional Group will sign a Memorandum of Understanding (MoU) which will clearly delineate the roles and responsibilities of both parties, the terms and conditions, and stipulate the subsidy amount to be made available from DEF and the amount to be invested by DDC from its own sources.
- Subsidy from DEF and the investment of DDC's own source will be deposited in the CEF. In order to make the transparency of the fund to be deposited in CEF, a fund (cheque) hand-over ceremony will be held in the village/community by

informing all Functional Group members. The investment of VDC will also be transferred to CEF in the similar manner.

- Fund received from DEF, DDC, VDC, the community and other institutions will be deposited in CEF. The CEF bank account will be operated with joint signatures of the MHFG and the Energy Development Officer. All purchases related to the construction and installation of the project will be done through CEF with consensus decisions of MHFG.

d) The CEF will make payment to the micro-hydropower constructor as per the following:

- **First Instalment:** Upon entering into agreement, the installer/supplier may be paid 30-50 percent of the estimated subsidy amount as an advance payment against an Advanced Payment Bank Guarantee (APBG). In cases where first payment is less than 50 percent, the installer/supplier may be provided with additional advance payment to make 50 percent of contract amount on delivery of material and equipment to the project site. The Bank Guarantee will be released after the necessary inspection of materials and equipment by technicians. If the installer/supplier does not submit the APBG, the 50 percent payment will only be made after the delivery of electromechanical material and equipment to the project site.
- **Second Instalment:** The DEES will recommend to CEF for a payment of up to 90 percent of the contract amount to the manufacturer/installer on fulfilment of successful test run for the prescribed period depending on size of the scheme and submission of the commissioning and the Power Output Test (POT) reports in a prescribed form and household connection certification from local government covering electrification of at least 75 percent of target households, and upon hand-over of the project.
- **Last Instalment:** Remaining 10 percent amount will be released after one year from the date of project hand-over and upon verification of the quality of equipment, ASS quality and the remaining 25 percent of households being electrified.

## Criteria for Subsidy

For subsidy, a community micro-hydropower scheme must meet the following conditions:

i. The scheme should be incorporated and endorsed in the annual plans and programmes of the DDC.

ii. The use of water should be registered in the District Water Resource Committee to avoid the water-rights related conflict during the implementation phase.

iii. The required land for the construction of micro-hydropower should be legally transferred to the related MHFG.

iv. The proposed scheme must include a feasible business plan; a community contribution and a vulnerable community and environmental impact mitigation plan, in addition to a detailed project design.

v. The distance of the scheme from the road head should be assessed and ascertained by the consultant and REDS and verified by the respective DDC.

vi. The MHFG should mobilize the required resources and means for constructing the micro-hydropower scheme.

vii. The feasibility of the project must be approved by the TRC.

viii. The proposed tariff must be able to meet the overhead and operational costs (i.e. staff salary, regular maintenance, etc.).

ix. The MHFG must possess the proof of loan approval in the case of loan financing, local government investment and proof of deposit in CEF for funds collected from community.

x. The scheme should constructed only by a company qualified by AEPC.

xi. The proposed project should have a positive net present value of the actual cash flow of the project after repayment of loan and interest at an annual discount rate of 10 percent.

xii. The micro-hydropower scheme must use at least 10 percent of the available electricity for productive end-use.

xiii. Power Output and Household Connection Verification (POHCV): With the given head and flow, the actual power output should not be less than the designed output under any circumstance. POHCV will be as per the programme guideline. If the verified power generation is less than the estimated capacity during the design stage, or irregularity due to negligence of the manufacturer/installer, the amount will be deducted on a reduced kW basis at the rate determined/approved by the TRC from the second instalment due to the manufacturer/installer.

xiv. **Warranty Period:** The supplier/installer must provide a warranty period of at least a year on the electromechanical equipment of the micro-hydropower project. This has to be clearly stated in the contract agreement signed by the supplier/installer and MHFG. During the warranty period, the installer/supplier must do at least two routine checks of the plant and provide suggestion to the developer for the further improvement operation and management. The supplier/installer will be responsible for rectifying any problems arising due to poor workmanship, material and supervision. The community will be responsible for problems arising due to negligence on part of the operator and manager.

xv. Investment from the local government in the form of share participation will be mandatory. However, DEES will coordinate with other institutions active in the district to mobilise resources to reduce the financial burden on the community. With the support of DEES, MHFG will have to get commitment from DDC and VDC for investment of at least 5 percent of the total cost of every project.

**End-Use Promotion**

Financial assistance will be made available at CEF by the programme for the promotion of productive end-use of energy. For this up to NRs. 250,000 at the rate of NRs. 10,000 per kW will be made available. But, the productive end-use promotion must have been done within 6 months from the date of micro-hydropower scheme installation and MHFG must have the business plan approved from DEF. Although that amount is the grant to CEF, it will be made available to entrepreneurs in the form of soft loan. Entrepreneurs will have to fulfil following criteria to receive this loan:

i. The entrepreneur must be a member of the MHFG.

ii. The entrepreneur must submit business plan to MHFG clearly stating the purpose and the amount of loan required.

iii. The loan will be provided to potential entrepreneurs after comprehensive discussion on such requests. But, such loan amount should not exceed 50 percent of the total investment of the enterprise. While prioritising enterprises, MHFG will consider community benefit, poor and disadvantaged castes, employment-orientation, entrepreneur's skill, honesty, etc.

iv. Interest rate for such loan will be determined by the MHFG meeting. Also, while receiving the loan, a contract agreement paper containing terms and conditions, interest rate, the repayment schedule must be signed by the entrepreneur and MHFG.

**Monitoring and Evaluation**

a) In order to extend access of the programme's performance to all levels, PMC, PMU, AEPC, WB, and UNDP will conduct regular monitoring. The monitoring work will be conducted with a coordinated, consultative and participatory involvement of DDC, VDC and local communities. The PMU will prepare a special monitoring plan every year which will also include the quarterly regional reviews of programme activities. Also, the PMU will prepare the Annual Programme Report every year and make tripartite review, if necessary. The monitoring report will be submitted to AEPC, UNDP and the World Bank. The programme will be subjected to midterm evaluation by independent evaluator during the third year of its implementation.

b) The MHFG should mandatorily hold mass meetings with all the beneficiary households for making any major decisions such as, selecting the installer, fixing the electricity tariff structure, labour allocation for the project, etc. The decision of the meeting will be through a consensus, which makes the operation of CEF and MHFG funds transparent.

c) The monthly meeting Community Mobilizer (CM) will take place in the presence of the Community Mobilization Coordinator and EDO. At the monthly meeting, the CMs will inform the district staff on the progress and difficulties of their respective micro-hydropower schemes.

d) It will be mandatory to conduct test operation of the project in the presence of the representatives of MHFG, VDC, financial institutions, DDC, REDS, as well as the supplier/installer and other stakeholders. This will include both visual check and electricity output measurement.

e) The testing and commissioning of micro-hydropower plants should be carried out as per the guideline for Testing, Construction/Installation and Hand-over. The outcome of the visual check and performance test will have to be recorded in the prescribed format and signed by the representatives of all organizations.

f) After the completion of the activity, MHFG will have to commission public audit to make clear all income and expenditure during carrying out the activities. That audit endorsed by the MHFG should be made public through a public display on the notice board.

## 5.3. Wind Energy

Currently, in case of wind energy, the main activity will be to collect the wind data. Subsidy for wind energy will be provided only for electricity generation. The possibility of wind energy for rural electrification will be explored in areas that are not connected by the national grid. AEPC will be responsible for matters pertaining to the promotion, dissemination, quality assurance and monitoring. In order to make subsidy available and to identify potential location for the wind energy programme, AEPC may initiate a wind energy programme for rural electrification after making support available for generating and distributing electricity in rural area as a pilot project.

### 5.3.1. Subsidy Delivery

Qualified company/institution will have to apply to AEPC to conduct detailed study of wind energy project, based on the project identification report with verified wind data as a Pilot project as mentioned above. After approval from AEPC, the company/organisation will take responsibility to submit detailed project description including business plan of the proposed project to AEPC. AEPC will assess the report and other criteria for subsidy and if project complies with all the criteria, approval will be given to such projects. The company/organisation will then fill up prescribed application form for installation of wind turbine and submit to AEPC. AEPC will assess the application form and approve the installation. AEPC will release 50 percent of the estimated subsidy amount as an advance against a bank guarantee at the time of the approval of subsidy. After submission of the commissioning report, AEPC will release up to 90 percent of the subsidy, if everything is found to be in order. After confirming one year of satisfactory functioning and ASS provision by the company/organization, AEPC will release the remaining 10 percent of the subsidy.

### 5.3.2. Criteria for Subsidy

For the subsidy, Wind Energy System must meet the following conditions:

a) Subsidy will only be available to Nepalese Citizens for specified Wind Energy System installed in rural area not electrified by other means.

b) The feasibility study, design and supervision of the installation process of the wind energy system must be done by qualified engineer.

c) Subsidy will only be available for wind turbine of 100 to 1000 W capacities.

d) The subsidy will be made available based on the number of households electrified by Wind Energy System. The system must be able to supply each household with an average of 7 kWh per month of electricity.

e) Qualified company/organisation must install wind turbine using certified materials and equipment. The certified materials and equipment are those that comply with specified standards and are RETS certified or meet international standards.

f) Qualified companies/organisations must assure adequate After Sale Services.

g) Subsidy request must be made on the prescribed application form.

## 6. Rural Energy Fund

Rural Energy Fund (REF) has been established to channel subsidy renewable energy programmes on biomass energy technology, solar energy (SHS and SSHS), micro and mini hydropower and other programmes with the support of the Government of Nepal and external donors. Currently, while subsidy amount under ESAP being mobilized through this fund, subsidy amount of other programmes under AEPC will be mobilized gradually after preparing the detail modality of the REF.

REF will remain under the supervision of the Alternative Energy Promotion Development Board. There may be one or more funding mechanisms as required by various ongoing and future programmes in the field of rural energy. If the Government of Nepal provides the fund other than the matching fund available for subsidy for renewable energy particularly for electrification (e.g. solar energy, micro and mini hydropower project, etc.) and installation of biomass energy system, subsidy will be channelled through this Fund in accordance with the modality of the Fund. Only concerned officer-level staff of AEPC can make the final subsidy recommendation to REF.

### 6.1. Rural Energy Fund Committee

REF will be directed by a committee. There will be representatives from the Ministry of Environment, Ministry of Finance, National Planning Commission, external donor organisations, the private sector and non-government organisations and renewable energy experts in the committee.

REF committee shall convene for general meetings on a quarterly basis and ad-hoc meeting will also be held if requested by members of the Executive Committee (EC). The committee will review on a quarterly basis financial and physical progress, and make available comment and recommendations on the fulfilment of investment targets, and assess the sufficiency of funds and cash flow with relation to investment and operational expenses. The committee will review the annual audited financial report and will submit report to Alternative Energy Promotion Development Committee annually.

### 6.2. REF Executive Committee

The existing ESAP subsidy amount will be managed by the Executive Committee with assistance from the REF secretariat.

AEPC ED will be the Director of the Fund and ESAP CA from donor agencies and the Account Chief of the Centre will be other members of the committee. The Director of the REF will be responsible for the daily operation and for all matters pertaining to the use of the Fund. For the payment of subsidy amount made available by ESAP, there will be joint signatures of donor agency representative and the Director of the committee, while Director will sign in other than ESAP fund. The EC will meet on a regular and on as and when required basis. ESAP will bear the cost of operation of the secretariat of the REF.

Existing arrangement will continue for the subsidy amount available from donor agencies to REDP until the mechanism of the Fund is amended.

### 6.3. REDP- Programme Management Committee

A Programme Management Committee (PMC), with AEPC's ED as the chairperson, can take decision related to programme implementation including the development of necessary guideline.

### 6.4. Tasks of Rural Energy Fund

The main objective of REF will be to provide cash subsidy to enhance access to the renewable energy technology for the rural people of Nepal. The EC of REF will carry out the following tasks:

a) Formulate the terms and conditions for support to subsidy within the framework of the Renewable Energy Subsidy Arrangement as decided by Government of Nepal.

b) Approve and disburse subsidy to projects that are recommended by programmes.

c) Carry out the necessary activities to make the existing credit arrangement improved and simple, undertake necessary promotion, awareness and encouragement to increase participation of commercial banks to enhance access of rural users of renewable energy to credit.

d) Undertake necessary effort to minimize the transaction costs associated with credit in rural area through complimentary tools such as group lending and guarantee system with participation of more and more financial intermediaries such as local financial institutions, cooperative institutions, etc.

e) Develop necessary penalty mechanism, as well as guideline/manual to administer subsidy delivery in collaboration with respective technical support programme.

f) Function as the secretariat of the REF committee.

### 6.5. Auditing

Auditing of REF will be done by the Auditor General's Office on an annual basis or in accordance with agreement made with the donor agency. The final annual audit report will be made public through the AEPC website.

## 7. Other Provisions

### 7.1. Preparation and Approval of Guideline, Standard and Procedure

The guideline, standard and procedure stipulated in this delivery mechanism will be prepared by the related programme and be approved as described in the delivery mechanism and if not described, AEPC will approve them.

### 7.2. Interpretation

If there appears a problem or lack of clarity during the implementation of this delivery mechanism, the interpretation made by AEPC will be final.

## 7.3. Review

Subsidy delivery mechanism shall be reviewed every two years or as per the requirement. An independent consultant shall appraise the performance of qualified companies every alternate year.

## 7.4. Repeal

7.4.1 "The Renewable (Rural) Energy Subsidy Delivery Mechanism 2065" has been repealed.

7.4.2 The work and actions undertaken according to the mechanism specified in 7.4.1 above will be considered as being in accordance with this mechanism.