
Development of Private Sector

The dissemination and adaptation of different rural energy technologies, including the micro hydro, will be increased in the remote areas with the creation of Rural Energy Service Centers. Keeping this in mind, REDP has been emphasizing on the capacity building of private companies or workshops through the development of infrastructure as well as human resources.

Despite of high potential for exploiting renewable energy resources, the efforts in the promotion of such systems has only been minimal. One of the basic issues or problems in the proliferation of renewable energy systems for the sustainable development of rural areas of the country like Nepal is the absence of technical backstopping that includes repair, maintenance and other support services. Similarly many rural energy development efforts being carried on in the rural areas of Nepal could not emerge as sustainable as are expected largely because the local areas lack manpower with required technical skills to service, repair and manage the energy systems installed in the villages. This ultimately ends up disrupting the whole energy generation systems that leaves many energy-dependent processes out of action and order.

Photo above : A small cross flow turbine being manufactured at RESC established in Burtibang of Baglung

Traditionally, the manufacturers, who are also the installers, have been providing these services and all of them are stationed either in Kathmandu or in Butwal. Whenever there are any breakdowns or technical problems in the systems, the machines thereof have to be brought either to these places for repairing and maintenance only because technical manpower for them are not available there. This is not simply feasible keeping in consideration the distance and difficult terrain of the villages where these renewable energy systems are installed and operated. This has been one of the biggest impediments in the way leading to sustainability of energy programmes in the country.

Developing trained technical manpower to establish the rural energy service centers in the needy remote districts not only makes the existing rural energy systems technically sustainable, but also contributes in creating employment opportunities at the local level.



The potential entrepreneurs participating in RESC training

Strengthening of the PSOs

It is in this context, REDP plans to support the district based private sector to solve this problem by setting up of at least one Rural Energy Service Centers (RESC) in each programme district. It has been found that the establishment of the RESCs at the district and/or at the Village Development Committee (VDC) levels have not only provided the technical backstopping to micro-hydro schemes, other renewable energy technologies (biogas, solar, ICS) and end-use appliances but also increased the motivation of the villagers in the installation and adaptation of the rural energy technologies. They have also created employment opportunities as village technicians in the locality.

Approach

REDP believes in two things for solving the problem of technical backstopping required for the widespread promotion of micro hydro schemes in the rural areas. First, there should be dependable workshops where entrepreneurs can avail various technical services, including the repair and maintenance, within the district. Secondly, the workshop should be operated by the private sector so as to ensure the timely availability of services without much difficulty. With the availability of technical backstopping available within the district for the regular and timely repair and maintenance works, the 'down time' of the MHPs and other renewable energy technologies in remote areas will be minimized considerably. Furthermore, the dissemination and adaptation of different rural energy technologies, including the micro hydro, will be increased in the remote areas with the creation of RESCs. Keeping this in mind, REDP has been emphasizing on the capacity building of private companies or workshops through the development of infrastructure as well as human resources.

In each district, REDP has also created a revolving fund for supporting and strengthening RESC at district level. The REDP support, which will be of limited scale, may vary from one place to another and from one situation to another. The support could be for acquiring physical facilities like machines and equipment or specialized training or both. The extent of the assistance, however, will depend upon the need and feasibility. In case of existing workshops, REDP will assist through specialized training and exposure visits so as to encourage and prepare them to develop the capability in providing services to MHPs and other rural energy technologies. But in case of the district or potential villages with-

out any workshop, REDP will identify the needs and support accordingly to foster the potential entrepreneurs to establish and operate workshops in the areas. Finally, in all cases, REDP will see and adhere that the programme support will in no way promote or create a monopoly or an unhealthy competition among the entrepreneurs.

Achievements and Experiences

Altogether, 30 potential entrepreneurs were trained in two phase with the support from REDP. Out of ten entrepreneurs from Kavre, Tanahun, Baglung, Dadeldhura and Baitadi who participated in first training conducted with the support from REDP in Butwal Technical Institute (BTI), Butwal, in 1997, seven have established Rural Energy Service Centers. These centers have been providing services in the five districts. Similarly, in 1999, 20 potential entrepreneurs from Sindhupalchowk, Dolakha, Myagdi, Parbat and Achham were trained in collaboration with Thapathali Campus under Institute of Engineering. They are in the process of establishing RESC in the respective districts. In addition depending upon the need, REDP has provided refresher training course to upgrade the skills of the RESC personnel trained in 1999. A specialization training on Peltric set installation was also conducted for RESCs personnel in collaboration with Kathmandu Metal Industries.

The list of the Rural Energy Service Centers established and in operation with the support from REDP is presented below:

1. Pokhara Urja Sewa Kendra, Dadeldhura
2. Galaxy Engineering and Energy Development Center, Baglung
3. Laghu Jalabidhoot Marmat Tatha Shambhar Kendra (Micro Hydro Repair and Maintenance Center), Burtibang, Baglung

4. Galkot Urja Sewa Kendra, Hatiya, Baglung
5. Patan Urja Sewa Kendra, Baitadi
6. Rural Energy and Alternative Energy Service Center, Damauli, Tanahun
7. Mahayan Urja Sewa Kendra, Kuntabeshi, Kavre

Followings are the RESCs in pipeline for establishment and operation

1. T.T. Engineering workshop, Dolakha
2. Gauri Shanker Himal Metal Workshop, Charikot
3. Rural Energy Service Center, Charikot-10
4. Gramin Urja Sewa Kendra, Hat bazar, Sanfekar, Achham
5. Gramin Urja Sewa Kendra, Beni, Myagdi

Micro Hydro Manufacturers

REDP supports and links the services of private sector organizations with proven expertise to the needs of the community. REDP has been coordinating and providing support to the manufacturing companies to strengthen the rural energy development initiatives. The MH Manufacturers Consultative Forum was established in 1997 and MH manufacturing companies are the members of this forum. This forum meets regularly and has provided platform to the manufacturers to share their experiences, identify problems and is-



A turbine being manufactured at Kathmandu Metal Industries

sues faced in MH manufacturing and installation, discuss on improving the quality of Nepalese expertise, technology innovations and networking.

Solar PV Forum

A forum has also been established in 1999 from among the solar PV manufacturers and suppliers. All solar companies pre-qualified by AEPC/ ADBN are the members of this forum. The members of the forum regularly meets, share experiences on solar home systems installation, discuss on enhancement of the quality of service provided and coordinate with one another for better implementation.

UNDP Rural Energy Project in Nepal to be featured at EXPO 2000

A United Nations Development Programme (UNDP) project that is promoting social mobilization and sustainable rural energy development in Nepal will be exhibited at Expo 2000, the international exposition which takes place next year in Hannover, Germany. The US\$4.65 million programme, which was launched in 1996, encourages community participation in the development of local renewable energy schemes, including small-scale hydropower, solar and biogas facilities. The development of renewable energy sources is a top priority for rural communities in Nepal, many of which are isolated in mountainous regions. The programme has helped to create 25 micro-hydro schemes, 31 biogas and 40 small-scale solar power facilities. It has also helped introduce improved cooking stoves and has organized community groups to manage forestry resources and tree planting schemes. "The unique feature of this programme lies in the fact that it does not choose technology as a point of entry, but social mobilization of communities," said Henning Karcher, UNDP Resident Representative in Kathmandu. "Being accustomed to joining hands, engaging in savings and loan schemes, and jointly building irrigation systems, roads and bridges, these socially mobilized groups assume, as a matter of course, responsibilities for operational costs as well as for maintenance and repair of the systems they have installed."

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