Approval by Mail: SREP Nepal: Rural Electrification Through Renewable Energy (ADB)

## Questions and comments from Switzerland

## **Questions:**

- 1. How do you rate the chances that the Central Renewable Energy Fund (CREF) will become operational during the implementation period of the project and what is your best estimate on when this will be the case?
- A: Supported by National Rural and Renewable Energy Program (NRREP), the CREF is still being set up. We expect the CREF will become fully operational by the middle of the implementation period, i.e. by 2017 as the implementation period of the proposed project is 7 years. AEPC is putting its extra efforts to expedite the process and if the political situation is improved, the operational date can be advanced.
- 2. What implications does the use of the two commercial banks instead of CREF have on the affordability of the RE projects on the local communities and consumers?
- A: Firstly, as the subprojects will be community owned and developed, the financial intermediaries are of secondary importance with respect to affordability. There will be no substantial difference of the implications on affordability by using commercial banks or CREF. For the proposed project, before CREF is functional, the \$5 million credit will be managed by AEPC and on-lent through the two commercial banks to communities or developers, based on the current mechanism of the Micro-hydropower Debt Fund (MHDF) established with support from GIZ. The on-lending terms from commercial banks to communities or developers are in line with market terms. Under proposed CREF, given the much larger portfolio of credit, the credit will be managed by a selected Handling Bank and on-lent through Partners Banks to communities or developers. The on-lending term from partner banks to communities or developers will also be in line with market term. In terms of practical impact on affordability, the two on-lending mechanisms are quite similar.
- 3. What is the level of an "affordable" tariff to be paid by end-users to cover O&M and battery replacement costs?
- A: It is specific to the subprojects and customers (household use or productive energy use). Based on investigation during project processing, the level of an affordable tariff for mini hydro is around \$0.10-\$0.20 per kWh, and it is higher for solar and solar/wind systems as additional battery systems would be required. The level of an affordable tariff for productive energy use is higher than for household use.
- 4. What is the expected reduction or avoidance of CO2 emissions of the project? How is that rationalized?
- A. It is around 18,000 ton CO2eq per year mainly due to displacement of fossil fuel/kerosene used for lighting purpose.
- 5. What is the expected impact of the project on the improvement of the framework

conditions for the scaling-up of renewable energy in Nepal?

A. The demonstration effect is very high as the mini-hydro installations will be 4-5 times larger than current micro hydro systems and solar / SWM installations will be 10 kW or larger scale versus current scale less than 1 kW. This will help increase the confidence and create new and expanded market in Nepal.

## **Comments:**

- 1. The project budget and the expected results (p.6) are not quite consistent with endorsed Investment Plan. There is a different distribution of funds (70/30 instead of 50/50) between mini/micro hydro and solar/wind powered mini grids. From what IP budget line do the USD 1.2 million for capacity building come from. The overall co-financing is by far lower than in the IP. These differences should be made explicit and justified.
- A. The line-item allocations in the IP are indicative. The project design has evolved and the ADF allocation has been reduced taking into account the on-going NRREP and capacity of AEPC. The mini hydro / solar/wind split also reflects the expected demand from host communities. Also it needs to be noted that, based on the discussions during IP approval by the SREP subcommittee, the expectation was that the additional \$2 million from SREP reallocated from the World Bank executed Biogas component would be used in the mini/micro hydro component. Which means the split would have been about 60:40. As for the level of co-financing, what was expected at the time of IP preparation is the overall co-financing for the complete SREP project in Nepal including grid-connected small hydropower component executed by ADB private sector division and IFC and not specifically for each of the individual components. Further, though not specifically stated, the proposed SREP project works in tandem with NRREP catalyzing its operation in the mini-hydro sector. This means NRREP itself can be considered equivalent to co-financing.
- 2. The Implementation Arrangements (Table 1 p.8) do not correspond to this project but rather to the overall NRREP program. This information is not directly relevant to the project. The table should be amended by concentrating only on the relevant information to this project.
- A. The proposed project is a subset of the NRREP and the implementation arrangements reflect this.
- 3a. How the operation and maintenance of the planned (solar, wind and hydro) systems will be assured in the communities and what capacity building measures are foreseen to empower the local communities.
- A. The O&M of planned systems have been well designed. Basically, three types of options are proposed subject to selection by user communities: (1) turnkey contractors provide equipment, labor warranty and training to user communities; (2) User communities outsource the O&M to private company; (3) user communities handle the O&M after capacity is built. There is specific capacity building component (output 4) under the Project which will help build necessary capacity of the community/ies to handle necessary O&M, among others. These communities will also receive support from

## Regional Service Centers established and supported by NRREP on O&M related issues.

- 3b. How the project financing using the commercial banks or CREF functions, notably by showing the precise use of SREP grants and the way they are absorbed or recycled in the context of the bank loans/micro-credits.
- A. The SREP grant will be managed by AEPC as grant (subsidy) to the subprojects, and the credit funded by ADF loan will be channeled to the subprojects through the commercial banks or CREF (when functional). The ADF loan term is 32 years (8 years grace period + 24 years payback period), and the subloans from commercial banks to user communities or developers are not more than 7 years, therefore the credit can be revolved. Please note the impact/outcome/output as well as leveraged funds of the proposed project do not include the effects of credit revolving.