

Outcome 1:

RERL Strategic Planning Meeting: The RERL Strategic Planning Meeting was held on 12 -13 January, 2018. AEPC, UNDP, GIZ/RERA, KfW, ADB, DfID and RERL staff participated in the workshop, which focused on renewable energy in changed federal context and AEPC's position and roles.

The workshop also reviewed RERL's draft Annual Work Plan for 2018 and progress of 2017. As RERL's project duration is only until July 2019, UNDP support for RE in general and AEPC in particular was also discussed, AEPC and UNDP agreed to prepare GEF and GCF proposals in this regard.



UNDP Delegation: On 27 March 2018, a high level UNDP official from headquarters and Chinese Embassy, Kathmandu visited Sindhupalchowk district to observe UNDP supported post-earthquake relief and recovery activities. The delegation accompanied by DCD and ACD of UNDP Nepal also visited the premises of the District Coordination Committee (DCC). UNDP had provided 3 prefabricated buildings for office use and solar PV system for lighting and operating equipment.

GEF Mission: UNDP GEF Regional Focal Person Ms. Usha Rao visited Nepal from January 21- 27, 2018. The visit aimed to observe and understand RERL activities and progresses and potential for GEF 7 RE projects. Ms. Rao visited the 12kW Daunne Khola Micro Hydropower Plan. In the



same occasion, RERL organized the stakeholder Consultation Meeting. The main objective of the meeting was to share RERL progress and impact and partnership with different governmental organizations and development partners.

UNDP, GEF and AEPC agreed in principle to prepare documents for GEF 7 to implement another RE project focusing on clean cooking, commercialization of RE projects with involvement of private sector and BFIs.

RE in Federal Structure: RERL and AEPC drafted a document highlighting roles and responsibilities of municipalities and provincial and central governments, which was clearly enshrined in the **Local Government Operations Act 2017**. This document further helps streamline activities at different levels of governance.

In this regard, RERL also drafted **AEPC's Transition Paper** reflecting the new context and provided inputs to **Draft AEPC Bill** to be submitted to Government of Nepal. In line with the roles and responsibilities given by the constitution to local, provincial and federal levels, RERL helped



AEPC to develop the **Support Package for Local and Provincial Governments** for promotion of RE in Nepal.

Grid Connection of MHP and Distributed Generation: After the interconnection of **23kW**



Syaurebhumi MHP, Nuwakot, with technical and financial support of RERL and financial support of AEPC, **2 more MHPs were successfully synchronized with the national electricity grid**. Leguwa Khola MHP, 40 kW, Dhankuta and Chimal MHP, 90 kW, Tapjejung were also interconnected with the grid in 2018. Interconnection of micro hydro with the grid helps generate additional revenue for the MHP and avoid

transmission losses of NEA. Furthermore, having generation systems at the end of the line helps improve voltage quality and system reliability. Based on the experience, NEA and AEPC will gradually grid connect other MHPs as the grid encroaches MHP service areas.

Further, AEPC/RERL also provided inputs to NPC's study on potential RE projects in all 753 municipalities of the country. The study identified 221 hydro, 481 solar PV, 1 wind and 50 biomass potential energy projects for distributed generation that would supply power locally as well as to the national grid. Given the advantages of distributed generation, RERL organize a half day workshop to share experience of China to Nepali policy makers from DoED, NEA and AEPC on 29 January during the Power Summit 2018 organized by Engineering Development Council. The workshop helped Nepali professionals to understand about innovative smart grid technologies implemented in China.

Municipal Energy Plan: In the new federal system, municipalities have been given the responsibility for development of small hydropower and renewable energy projects. RERL has prepared framework and drafted methodology for preparation of Municipal Energy Plan (MEP), which identifies the status of electrification and cooking fuel in use in the ward and the least cost alternative among grid extension, mini/micro hydro, solar PV, biogas and improved cooking stove. RERL is supporting two municipalities – Palungtar Municipality, Gorkha and Mahankal Rural Municipality, Lalitpur – to pilot preparation of MEP. RERL is working closely with Renewable Energy for Rural Areas (RERA) project of GIZ in this activity. RERA will apply the methodology to prepare MEPs in Provinces 1 & 7 in RERA working areas.

Photo Voltaic Pumping System: RERL is providing technical assistance to AEPC to install PVPS funded by KfW. So far, 31 PVPS have been installed in different parts of the country. These projects are primarily for providing water supply for drinking and household uses.

Electric cooking: RERL is lab testing low wattage electric stove with storage facility. It is expected that low wattage electric stoves and appliances will be suitable for MHPs as there is limitation not only of energy but also power. RERL plans to test these stoves in the field to ascertain suitability in rural areas and user's acceptance.



Taplejung Mini Grid: RERL is supporting AEPC to implement Component 3 of the World Bank funded Kabeli Transmission Project. The Taplejung Mini Grid interconnecting 6 mini/micro hydropower plants to evacuate electricity to the district headquarters is being developed under this project. RERL has provided assistance to finalize the detailed feasibility study of the project and establishment of Taplejung Mini Grid Development Functional Group. RERL designed control and protection system for interconnection and parallel operation of micro hydro power plants. AEPC has allocated NPR 30 million to procure and install control and protection system, which have been transported to the project site.

Mini Hydro Status: RERL is supporting AEPC/SASEC to develop mini hydropower projects in different parts of the country. RERL is providing technical assistance for survey, design, procurement, construction supervision, institution formation and strengthening, business opportunity assessment, financial closure and business plan preparation. The projects are at different stages of development given in the table below.

Projects	kW	HHs	Funding	Status
Simrutu Khola, Rukum	200	1,386	SASEC	Civil works under construction Institutional Strengthening of cooperative initiated Transportation of Penstock at site
Giri Khola, Jumla	200	1,840	SASEC	Negotiation with NIBL for credit funding Institutional Strengthening of cooperative ongoing Contractor has been mobilized
Phawa Khola, Taplejung	500	2,093	SASEC	Contract awarded for supply & installation of electro-mechanical equipment & civil works 700 M canal completed
Tara Khola, Baglung	394	2,200	AEPC	Special Purpose Vehicle (SPV) established Intake, Canal, Desilting Basin, Forebay completed Electro-mechanical Equipment being delivered.
Upper Junbeshi, Solukhumbu	250	615	AEPC	Construction of civil works ongoing.

Coordination with ICIMOD for RE in Model Village: AEPC is providing solar PV solutions to ICIMOD supported earthquake resistant Dhugentar Model Village in Nuwakot district. With ICIMOD’s support about 100 houses have been built with hollow concrete blocks. All the residents of the model village belong to the marginalized dalit community. AEPC is providing solar systems for lighting residences, streets and a community center. RERL carried out feasibility study of RE solutions for the model village.

Outcome 3:

Orientation on Productive Energy Uses: RERL organized orientation on Productive Energy Uses for focal person and field coordinators of Regional Technical Service Providers (RTSP) of AEPC. The main purpose of the orientation was to provide information on subsidy policy and the processes of delivery mechanism for promotion of productive energy uses. Altogether 18 men and 2 women actively participated in the training.

Outcome 4:

Monitoring Training: RERL supported Monitoring and Quality Assurance Unit of AEPC to carry out a monitoring training for engineers. The main objective of the training was impart knowledge and skill to effectively and efficiently carry out field monitoring of the RE systems.

