

Concept Paper

Online Training of SAARC Professional on Small, Mini and Micro Hydro Power Generation

Background:

Energy security is an important agenda for peace and prosperity of the South Asian region. The demand forecast and identification of potential energy sources in long time horizon are very important for securing and maintaining the energy security in the region. Most of the SAARC countries are blessed with huge hydro power potential. The availability of ample hydro potentials in the region can be harnessed to meet increasing energy needs of the region. Besides, large hydro, there are definite prospects of development of small-mini-micro hydro power.

Small hydro is referred to as harnessing of power from water in a small scale, usually with the capacity less than 10 MW. Based on the size (capacity) of the hydro power plant, they are further categorized into pico (usually 5 kW), micro (less than 100 kW), mini (between 0.1 MW and 1 MW) and small (between 1 MW and 10 MW). Small hydro can be connected to a central grid, to an isolated grid or can be connected to a dedicated power load. Small Hydropower is considered as one of the lucrative options for generation of electricity and it provides reliable energy supply with minimum adverse environmental impacts. Thus, development of small hydro plants can help in boosting the access of electricity in South Asian countries. In this context, it is proposed to conduct an online training for professionals of SAARC Member States. Such online training will deliver the much-needed exposure and expertise to SAARC professionals to capitalize the experience gained from each other.

Introduction:

SEC under its thematic area of “Program to Successfully Implement Technology Transfer (POSIT)”, proposes to conduct a three (03) days training on “On-Line Training of SAARC Professionals on Small, Mini and Micro Hydro Power Generation”. Experts having good knowledge in such small, mini and micro hydro projects will be hired for conducting the training.

The online training will cover the overview of regional power sector, types and sizes of hydropower project and brief on the share of such small-mini-micro projects. In addition, the participants will be given a comprehensive briefing on the technical aspects of these projects, its design aspects, O&M, evacuation of the generated power and interconnections. The participants will also be briefed on the financial aspect of the projects, investments, environmental issues, policies and regulations, tariff etc.

Objectives:

This online training will be an invaluable opportunity for the professionals of Member States to get ideas about the small-mini-micro hydropower projects. SEC envisages accomplishing the following objectives through the proposed intervention:

1. Capacity building of the energy professionals from SAARC Member States on small-mini-

micro hydro project.

2. Sharing experiences in the domain of these small-mini-micro hydropower projects and evaluation of the requirements for coming up with such projects.
3. To get better view about the potential for community-based projects, policy and regulatory support.
4. To understand the environmental, financial, investment, social, and technical aspect of small-mini-micro projects.

Major Aspects to be Covered:

The training will cover, but is not limited to the following broad contents:

1. Available potential for small-mini-micro hydro projects in the region.
2. Policy and regulatory requirements.
3. Financial and investment opportunities.
4. Technical and management capability.
5. Installation, commissioning, evacuation and O&M of the project.
6. Multilateral and private sector participation.
7. Community based projects and its operation in isolation.
8. Environmental aspect.
9. Socio-economic impacts of such projects.
10. Use of modern ICT based technologies for operation.

Venue of Online Training:

This online training shall be broadcasted from the office of the SAARC Energy Centre.