

Concept Paper		
Dissemination Workshop for the Study on “Development of Roadmap for Implementation of Smart Grid: Concepts, Practices and Technologies in SAARC”		
Dissemination Workshop	PRG-156/2019/POSIT	Bhutan

Background:

Power systems of SAARC Member States are facing several challenges such as high Aggregate Technical & Commercial (AT&C) losses, grid outages and supply shortages. At the same time, the generation and supply networks are expanding and becoming more and more complex to meet the growing electricity demand in the Region. Grid integration challenges are further adding up with the fast-emerging central and distributed Renewable Energy (RE) generation plants primarily due to their inherent nature of intermittency and geographical diversity. Consequently, the conventional unidirectional grid control practices are failing to keep up the sufficient levels of efficiency and reliability. World is now shifting towards Smart Grid technologies. Taking help from latest digital infrastructure, Smart Grids allow a bidirectional information flow, automated grid operations and optimum management of grid assets. Smart Grid Technologies are now helping in seamless grid integration of RE resources, Demand Side Management (DSM) and maintaining a desirable Power Quality.

However, the transition of existing electricity grids to Smart Grids needs significant efforts on the infrastructural, regulatory, policy and institutional levels. To assess these aspects in a holistic way, SEC outsourced a study in 2018. The study developed the roadmaps for transition to Smart Grids for each SAARC Member State. The study also developed a Smart Grid framework and identified a list of potential Smart Grid interventions for all Member States along with deliberations in respect to policy guidelines, strategy to be adopted and regulatory tools required. These framework tools will also enable SAARC Member States to analyze any Smart Grid intervention envisioned in their short/long-term power system plans. The subject workshop aims to disseminate the findings of the Smart Grid study, to get feedback from member states for value addition and to build awareness among Member States.

Introduction:

SEC, under its thematic area of “Program for Successful Implementation of Technology Transfer” (POSIT), will hold the subject dissemination workshop for the study on “Development of Roadmap for Implementation of Smart Grid: Concepts, Practices and Technologies in SAARC Region” outsourced by SEC in **FY-2018**.

The dissemination workshop will be a two-days long activity and will be divided into three stages. The first stage will consist of the study dissemination by the authors. In the second stage, prominent Smart Grid technology and policy experts from within and outside the SAARC region will share their valuable experiences with the delegates and inform them of the latest trends worldwide. The third stage will consist of a short visit to a Load Dispatch Center for the workshop delegates to get field insights and combine theoretical knowledge with

practical knowledge. This workshop will be attended by 15 to 20 delegates from the host Member State and two delegates each from rest of the Member States.

Objectives:

Following are the objectives of this Dissemination Workshop:

- 1) Dissemination of the Study and its findings/recommendations to delegates from SAARC Member States
- 2) Value addition and further improvement of the study report based on feedback and comments of the delegates from each Member State
- 3) Awareness building regarding Smart Grids among the stakeholders including decision makers, grid operators, energy professionals etc.
- 4) Way forward and facilitation for the Member States for a future transition towards Smart Grids.

Major Aspects /Topics to be covered during the Workshop:

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

- 1) Delegate presentations on status of Smart Grid technologies in SAARC Member States
- 2) Assessment of Smart Grid drivers in SAARC Region and barriers to its deployment
- 3) Introduction and presentation of Smart Grid roadmaps for SAARC Member States
- 4) Discussion on Potential Smart Grid projects for selected SAARC Member States
- 5) Expert talks and case study presentations on utility best practices in improving power system efficiency, smart operations and planning.

Relevance, Coherence and Sustainability:

The dissemination of results and recommendations of SAARC Smart Grid study will relate to SEC's efforts to promote the best, modern and smart practices in SAARC region. In coherence with SEC's thematic program for successful implementation of technology transfer, the dissemination workshop will provide the roadmap for Smart Grid implementation in SAARC Member States taking benefit of the technological advancements secured by the modern power utilities worldwide. The dissemination workshop will spark a wave of brainstorming efforts across SAARC region on this globally emerging phenomenon. In line with SEC's Sustainability objectives, SEC will synergize these efforts in future by organizing further activities to promote the wider promotion of Smart Grid concepts in SAARC region.