

Concept Paper		
Workshop on "Techniques on Energy Conservation & Efficiency in Buildings"		
Special Project	PRG-169/2019/PROMO	Sri Lanka

Background:

Energy is the key component of economic development and prosperity. Hydrocarbon reserves in South Asia are limited; all SAARC Member States are net importers of petroleum products. Ever growing electricity need in the SAARC Member States is leading to increased oil dependence as well as resulting in the environmental issues. Energy Conservation and Efficiency is an important measure to relax the dependence on the petroleum products and thereby, mitigate the environmental impacts. Despite the great potential for energy conservation and efficiency improvement, some of the Member States are lacking behind.

Buildings are one of the largest energy-consumers that account for about one-third of energy use globally, and considerably more in many South Asian cities. Buildings hold equal share of carbon dioxide (CO₂) emissions. Since buildings infrastructure has a long life, therefore, energy performance of the rapidly growing built environment will have a long-term impact on energy consumption. Nearly two thirds of the energy consumed in buildings goes for space conditioning, while the remaining one third is mostly in the form of electricity used for appliances and lighting. Energy use in the buildings is mainly for improving the health and indoor comfort, safety, and functional aspects of the building.

In this context, energy efficiency schemes targeting reduced use of energy in buildings holds good potential. Energy efficiency in buildings covers a wide range of themes. The whole building process is energy consuming, with an environmental impact, and needs a life-cycle approach from design to end of life. With a view to bringing about energy conservation and improving energy efficiency in building sector in SAARC Member States, SEC proposes to hold a training.

Introduction:

SEC, under its thematic area of “Programme to Minimize Oil Imports through Improvements in Energy Efficiency and Fuel Substitution” (PROMO), proposes a Training on Energy Conservation and Efficiency in Buildings. Keeping in view the importance of the matter, this training has been planned for three days. It will be mainly divided in three segments, with each segment spread over a day. On day one in first half, Energy efficiency in all sectors of the economy, its importance and techniques would be discussed while in the second half, energy conservation in buildings will be discussed, including energy saving potential, role of policy, market forces and building energy codes. On day 02, sub categories of building envelope including heating/ cooling, lighting, along with equipment standardization will be discussed. Whereas the last section (day 03) will cover health and indoor comfort, safety, and functional aspects, life cycle assessment, environmental impacts and way forward.

Objectives:

The objectives of this training are to:

1. Build and strengthen the capacities of SAARC professionals on the technical, economic and policy aspects of implementing energy conservation and efficiency in buildings;
2. Support the establishment of energy efficiency markets through the creation of a regional network of energy efficiency experts.

Major Aspects /Topics to be covered during the Training

The following major areas/ topics shall be covered in this training:

1. Energy Conservation in the buildings: The Role of Policy and Market Forces
2. Energy Building codes
3. Appliances Standardization and labeling
4. ICT technologies for energy-efficient buildings and public spaces
5. Existing barriers in achieving Energy Conservation and Efficiency in the region
6. Cross-Border programs, collaborations and cooperation for development of Energy Conservation and Efficiency programs
7. Role of Public Awareness in Energy Conservation and Efficiency
8. Environmental control and LCA (Life Cycle Assessment) approach in relation to energy efficiency of buildings

Potential Professional Resource

Selected renowned Resource Persons from Member States and representatives of international donor agencies having specialty in the field of energy conservation will be invited to share their knowledge and experiences with the distinguished participants on the topics jointly developed by SEC and the co-organizer. Moreover, important experts in the field of Energy Conservation and efficiency from and outside the SAARC region will also be invited to share their research and experiences on energy conservation in buildings. SEC's in-house Professional shall also be contributing to the training by sharing the technical knowledge with the participants.

Venue of the Training

A Three-day training is proposed to take place in Sri Lanka in collaboration with a suitable organization selected in consultation with the respected GB Member from Sri Lanka. Sri Lanka is among one of the leading Member States in the field of energy conservation and efficiency, particularly in building sector. It is expected that training participants will be benefited from Sri Lankan experience of progress in achieving energy conservation in buildings.