

## Concept Paper

### Webinar on "Designing Energy Efficient Buildings in SAARC Region".

June 23, 2020 from 1100-1400 hrs (Pakistan Standard Time)

#### Background:

Globally, the buildings and allied construction sectors accounts for 36% of the final energy consumption.<sup>1</sup> With increased urbanization in the SAARC Member States, it is envisioned that the number of buildings will increase in future which shall result in increased demand of electricity. Most of the Member States in SAARC region are energy deficient and rest have very little margin between their existing supply and demand. With the increasing demand of electricity, more investment in new generation sources would be required in future. One of the effective ways of reducing electricity demand is through constructing Energy Efficient (EE) buildings and installing EE appliances in them. The investments in an EE building is 2-3 times less than the cost of investments in the supply side of the energy system.

In buildings; Space heating, space cooling and lighting, which together accounts for most of building energy use; depends not only on the energy efficiency of temperature control and lighting systems, but also on the efficiency of the buildings in which they operate. The Building designs, construction and materials have a significant effect on the energy consumed. Windows also significantly contribute in EE of the buildings. Heat gain and heat loss through windows are responsible for 25%–30% of residential heating and cooling energy use. Energy Efficient windows are an important consideration for both new and existing homes. There are numerous other ways to increase the energy efficiency of a building, and many different parts of a building that can be improved to boost this value. The SAARC Region has very diverse type of climates in different areas. The design and selection of an appropriate option before constructing a building at every step is very important and need of the day.

#### Introduction:

SAARC Energy Centre shall conduct a Webinar on "Designing Energy Efficient Buildings in SAARC Region" which will be aimed towards enhancing the capacity of the professionals in the SAARC region. This webinar will be knowledge sharing event specifically targeted to measures and interventions which can contribute to the increase in energy efficiency of the Residential / Commercial buildings of the SAARC Region.

The Webinar will cover on the most pressing topics of Energy Efficient Buildings, with experts leading the discussions and presentations on proven best practices, cost-effective strategies, and innovative new ways to approach sustainability and energy performance.

---

<sup>1</sup> Energy Efficiency Buildings, IEA official website, accessed on 13 Sept, 2019

**Objectives:**

The objective of this webinar is to gather technical inputs and latest trends in the field of Energy Efficient Buildings from the leading experts of industry, academia and research institutes within/outside SAARC region. The knowledge and information will be shared and disseminated during the webinar with the participants.

**Major Aspects /Topics to be covered during the Webinar:**

The webinar shall cover, but not limited, to below mentioned aspects of the EE in buildings sector:

1. Energy usage in overall building sector;
2. Energy required for Heating, Cooling, Lighting and Ventilation;
3. Orientation and Geographical location;
4. Insulation design in walls and roof;
5. Thermal Comfort and Air Quality;
6. Standards, labelling and Indicators for Windows;
7. Window design and Frame material;
8. High performance and EE appliances;
9. Technical, Financial and Market barriers;
10. Other Emerging Technologies and etc.

**Relevance, Coherence and Sustainability:**

SEC, in the past, had conducted various research studies, training workshops and webinars on the topic of Energy Efficiency in the SAARC region. The work was done in the sub-sectors of EE i.e., Codes, Standards, Audit, Lighting, Industry etc. Through this webinar, SEC shall strive to disseminate latest trends and best practices of EE in residential/commercial buildings in the region. This work will also continue in future activities of SEC.

**Potential Professional Resource:**

The experts within region and abroad shall be engaged during the webinar. SEC shall also engage researchers who are working in the Energy Efficient building sector. The engaged experts shall deliver their presentations during the webinar and respond to questions by the participants. SEC Program Coordinator will finalize the webinar agenda in close coordination with the experts/speakers.

**Venue of the Webinar:**

The Webinar shall be broadcasted from office of SAARC Energy Centre on June 23, 2020 from 1100-1400 hrs (Pakistan Standard Time).