PRG-57/2013/POSIT: SAARC Training Workshop for Energy Auditors/Managers

Concept Paper

Background

Energy is globally treated as development harbinger and South Asia is a region of developing economies. Even today, large sections of the people of this region do not have access to electricity. Though the governments of South Asian countries have vision to provide quality electricity to all citizens at an affordable price, the gap between power supply and demand is increasing day by day. It has been established through different research studies that 5-10% energy saving is possible simply by better house-keeping measures. Further 10-15% is possible with small investments like low cost retrofits, use of energy efficient devices, etc. Despite the great potential for energy conservation and efficiency improvement, it largely remains a neglected option in the region. Energy conservation and efficiency improvement not only assure grater energy access but also increase the competitiveness of the products in the cost perspective.

In the developed world, great efforts have been under taken to conserve energy in different ways, strengthening the energy reliability, adequacy and security. Some of the key energy intensive sectors identified for energy efficiency measures are aluminum, fertilizer, iron and steel, cement, pulp and paper, chloralkali, sugar, ice, textile, chemicals, refinery and petro-chemicals, metallurgy and mining, transport sector, railways and thermal power stations.

There is a growing realization, both at policy and implementation level, that energy conservation and efficiency measures enhance energy security by spreading available energy resources over a longer period of time and at the same time mitigate environmental impacts and further reduce the cost of energy delivery. By practicing energy conservation and making efforts for efficiency improvements, energy consumers become more conscious on how efficiently energy is being used and of the actual costs of energy waste. Although energy conservation is a catchy term yet it is not well conceived by most of the beneficiaries; a long list of beneficiaries exists including the utility with respect to lesser generation, transmission and distribution costs, and mitigation of losses; consumers in terms of economical and reliable supply; governments in terms of slashing the import bill of fossil fuels and enhanced economy due to greater energy access by the people, etc.

Energy conservation is no longer associated with energy rationing or curtailment; rather, it aims at identifying and targeting areas of wasteful use of energy and taking actions to reduce the waste to a bare minimum or to eliminate the waste completely, where possible. Consequently, the energy consumer would be able to produce the similar amounts of goods or services with lesser energy, or a higher level with the same amount of energy consumption.

Energy Audit

Energy Audit is the one of the most effective and proven tools for the implementation of prudent energy conservation and efficiency improvement measures. It enables a particular energy consumer to identify how efficiently is energy currently being used and what are the potential energy savings; what specific actions could be taken to improve energy efficiency; what is the cost of such actions; what is the optimal and appropriate set of actions required; and the roadmap for transforming the prevailing conditions to ensure the success of the program.

Precisely, Energy Audit identifies the areas of energy waste, determine potential for energy waste elimination, and establish priorities for implementation of strategies considering the financial as well as technical benefits.

a. Major Target Areas

- Lighting system
- Heating, ventilation and cooling system
- Steam and power generation, and distribution
- Pumps, furnaces, kilns, ovens and dryers
- Electrical load management and power factor correction

b. Objectives

- Identify potential areas of in-efficient energy usage
- Suggest strategies/mechanism to improve energy resource utilization through reduction or elimination of energy waste
- Improve productivity in multiple dimensions like reduction in raw material wastage, enhanced product quality, etc.
- Ensure minimal impact of energy price increase through optimal utilization of the energy
- Make available knowledge on share of energy in the total production cost
- Define options to achieve efficient energy management
- Provide ways for energy conservation that also mitigate the environmental issues.

SEC s Methodology

In order to promote the concept of energy conservation and efficiency improvement and to create awareness among the relevant institutions of the SAARC Member States, SAARC Energy Centre (SEC) in collaboration with National Transmission & Dispatch Company (NTDC) Pakistan; Bureau of Energy Efficiency, India (BEE); and the Sri Lanka Energy

Managers Association (SLEMA) has organized two days training workshop on Energy Audit for Energy Auditors/Managers.

Resource Persons and Participants

Four resource persons from the SAARC region and two participants from each of the SAARC Member States including professionals and government officials related to energy Efficiency/Conservation/Audit to discuss, debate and disseminate the techniques and tools of Energy Audit, its implementation, success stories and opportunities for practicing the Energy Audit in the region.

Counterpart Organization

The training programme will be conducted in collaboration with NTDC, Pakistan.

Venue

The event is planned to be conducted in Lahore, Pakistan.

Schedule

The programme is scheduled be held in the month of June 2013.

Training Workshop Contents

These will be developed jointly by the NTDC, Pakistan and the resource persons in consultation with the SEC.

Expected Outcome

The training programme/workshop will facilitate the SAARC Member States to launch/enhance energy audit initiatives in the diversified fields of energy usage to build up capacity and to enhance awareness among the professionals that will ultimately strengthen prevailing as well as upcoming energy conservation and efficiency improvement programs.