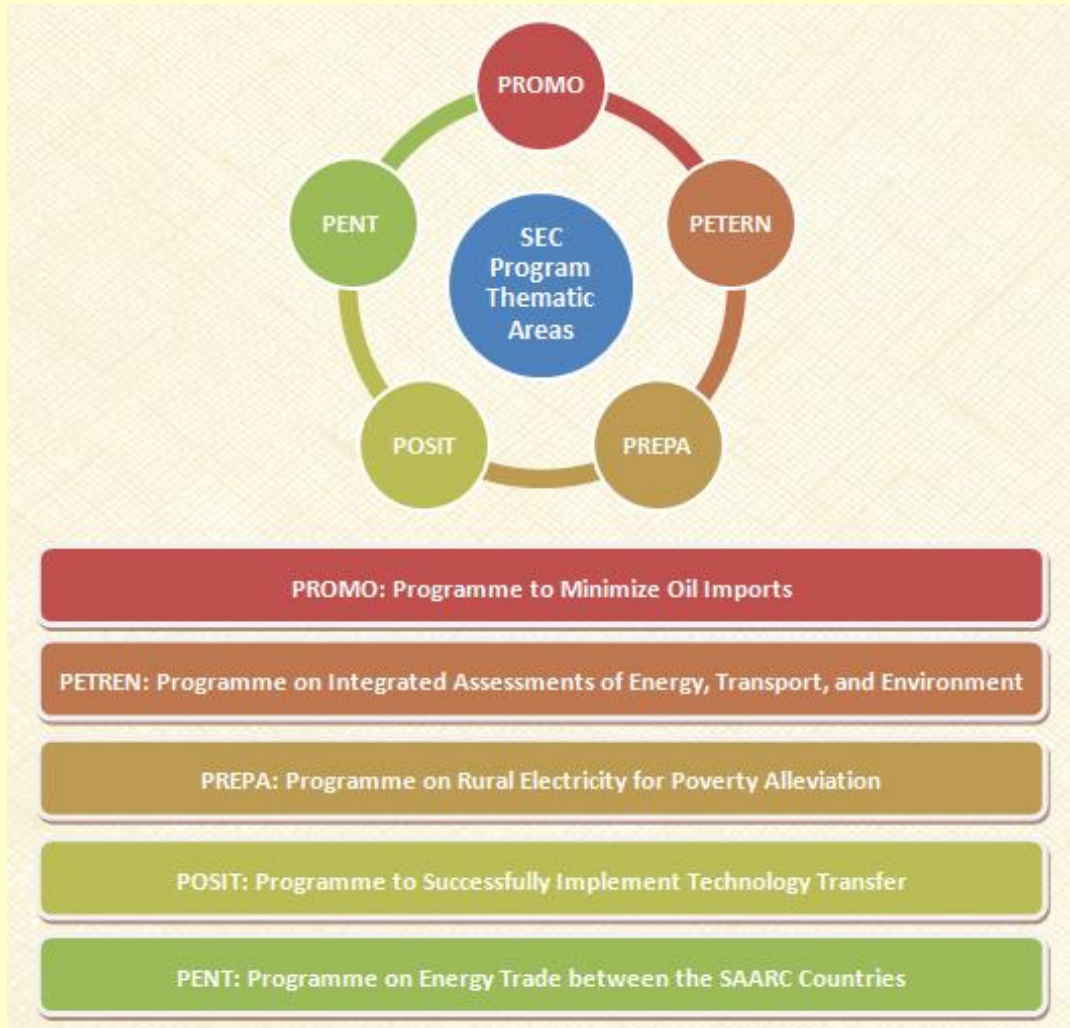


SAARC Energy Centre: Impact Assessment and the Way Forward



December 2015
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Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CBM	Coal Bed Methane
Centre	SAARC Energy Centre
CMPDI	Central Mines Planning and Design Institute, India
CMS	Content Management Software
CV	Curriculum Vitae
Energy Ring	SAARC Energy Ring (Electricity and Gas)
FAECE	SAARC Framework Agreement on Energy Cooperation (Electricity)
Governing Board	SEC Governing Board
HDIP	Hydrocarbon Development Institute of Pakistan
ICS	SAARC Improved Cooking Stoves
IPS	Institute of Policy Studies
KMS	Knowledge Management System
KPI	Key Performance Indicator
LFA	Logical Frame Approach
LNG	Liquefied Natural Gas
Member States	SAARC Member States
NGO	Non-Governmental Organization
NTDC	Pakistan National Transmission and Dispatch Company
PENT	Programme on “Energy Trade between SAARC Countries”
PETREN	Programme on “Integrated Assessments of Energy, Transport and Environment
POSIT	Programme to “Successfully Implement Technology Transfer”
PREPA	Programme on “Rural Electricity for Poverty Alleviation”
PROMO	Programme to “Minimize Oil Imports through Improvements in Energy Efficiency and Fuel Substitution”
Region	South Asia
Regional Centres	SAARC Regional Centres
SAARC	South Asian Association for Regional Cooperation
SAC	SAARC Agricultural Centre
SAME	SAARC Market for Electricity
SARPES	South Asia Regional Power Exchange Study
SCZMC	SAARC Coastal Zone Management Centre
SFC	SAARC Forestry Centre
SDC	SAARC Documentation Centre
SDMC	SAARC Disaster Management Centre

SEC	SAARC Energy Centre
SHRDC	SAARC Human Resources Development Centre
SIC	SAARC Information Centre
SMRC	SAARC Meteorological Research Centre
SRETS	SAARC Regional Energy Trade Study
STAC	SAARC Tuberculosis and HIV/AIDS Centre
Study	SAARC Energy Centre: Impact Assessment and the Way Forward
Team	SEC Impact Assessment Study Team
TOR	Terms of Reference
UCG	Underground Coal Gasification
USAID	United States Agency for International Development
WG/E	Working Group on Energy

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Executive Summary

For the first seven years of its existence, i.e., during 2008-15, SAARC Energy Centre (SEC), Islamabad has carried out activities and interventions in line with the mandate chalked out by SAARC in realization of its objectives and goals. Performance of the SEC and impact of its activities required an assessment in order to devise SEC's Strategic Roadmap 2017-2021 based on the lessons learnt through networking, research and knowledge sharing activities conducted over these years. The current vision and consistently emerging issues of the Region in respect of energy security and sustainable energy supplies demand a more focused attention in terms of results associated with a purpose built resource point as the SEC.

As such, no formal and systemized periodic review of SEC activities is in practice commencing from regular post Programme assessment to annual assessment before devising the annual plan of activities. Resultantly, there is no measure of impact of Programme activities contributing towards the overall achievement of SEC's objectives and goals at a time when the SEC is moving towards the next Strategic Roadmap. SEC Impact Assessment Study Team adopted a mix of quantitative and qualitative methodology for the assessment of SEC Programme activities that include short term studies, pilot/special projects, dissemination seminars and workshops spanning over its five thematic areas, i.e., PENT, PETREN, POSIT, PROMO and PREPA. These Programme activities were examined for effectiveness against customized Key Performance Indicators (KPIs) such as relevance, coherence, quality and effectiveness, sustainability and participation.

The SEC Impact Assessment Study involved a massive exercise of seeking feedback from a wide range of stakeholders who have remained associated with SEC as experts, participants in its various Programmes, and representatives of respective departments of the SAARC Member States. The input based assessment of SEC activities was further supplemented with personal interviews of a select group of such stakeholders and SEC staff members.

Review of SEC's data highlighted the need for an effective knowledge management system (KMS). Based on an analysis of broad ranged KMSs, SEC has been suggested certain tools for better and effective handling of its rich knowledge resource to capitalize the knowledge collected, created and/or transformed.

SEC has undertaken an impressive range of activities with a proactive approach to contribute towards the energy security of South Asia. The beneficiaries of these activities speak highly of their rationale and usefulness, on the whole. In view of the growing energy needs, SEC's task has become gigantic, which demands a strategic shift in its handling of programmes with a gradual but focused march to a set of goals during the next strategic period (2017-21). This could be termed as establishment and transformation towards realization of its goals. The Study report proposes SEC Strategic Plan 2017-21 which has been prepared through close liaison with SEC. The proposed plan essentially aims to capitalize on the previous interventions and move on to materialize the SEC's ultimate objective i.e. SAARC Energy Ring.

In order to be at par with the huge changes in the regional energy sector, SEC needs to further enhance its vision and mission. Such a need is valid for every modern organization to adjust its targets and strategies corresponding to the changes in other variables. It is high time for the SEC to change gear with respect to its functioning as a 'Centre of Excellence' in the energy sector for South Asia. Thematic areas also need certain adjustments with incorporation of concepts like smart grid, out of the box solutions, and an enhanced focus on renewables and country-specific issues.

Long term organizational development and excellence – leading to effective realization of goals – requires adequate financial resources and a committed professional team. SEC has huge potential at its disposal with respect to professional strength from the Member States. However, for improving the throughput of the SEC team, quite a few recommendations are being made based on the best practices. Financial resources can be augmented with collaborative arrangements, paid activities, and by working closely with donors as well as corporate sector.

Last but not the least, SEC should now move towards playing a role in the implementation of its findings related to the energy sector – though not as an implementer in itself rather as a catalyst – it has to move beyond studies and capacity building and undertake higher quantum of projects. For this Strategic Plan for the term 2017-21 is proposed which is aligned with the latest developments in the Region as well as across the globe; this plan essentially capitalizes on the previous achievements of the SEC team and challenges them to deliver in order to meet the energy needs of the people of South Asia.

1. Introduction

1.1 Background

With its Secretariat at Kathmandu [1], Nepal, the South Asian Association of Regional Cooperation – SAARC – was created in 1985 to strengthen and sustain the bonding among the people of the SAARC region, comprising Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. By the year 2007, Afghanistan also joined the SAARC.

SAARC provides a platform for the people of South Asia to work together in a spirit of friendship, trust and understanding. It aims to promote the welfare of the people of the Region and to improve their quality of life through accelerated economic growth, social progress and cultural development in the region. Cooperation in SAARC is based on respect for five principles of sovereign equality, territorial integrity, political independence, non-interference in internal affairs of the Member States and mutual benefit. Regional cooperation is seen as a complement to bilateral and multilateral relations of SAARC Member States. The perceived areas of cooperation in the SAARC region are as follows:

- a. Agricultural and Rural
- b. Biotechnology
- c. Culture
- d. Economic and Trade
- e. Education
- f. Energy
- g. Environment
- h. Finance
- i. Funding Mechanism
- j. Information, Communication and Media
- k. People to people contacts
- l. Poverty Alleviation
- m. Science and Technology
- n. Security Aspects
- o. Social Development
- p. Tourism

1.1.1 SAARC Regional Centres

SAARC Energy Centre, Islamabad, and ten other regional centres were established under the objective to promote the welfare of the people of South Asia, strengthen collective self-reliance, and promote active collaboration and mutual assistance in the economic, social,

cultural, technical and scientific field. All the regional centres along with their location are highlighted in the Table 1.1:

#	Regional Centre	Location	Country
1.	SAARC Agricultural Centre (SAC)	Dhaka	Bangladesh
2.	SAARC Meteorological Research Centre (SMRC)	Dhaka	Bangladesh
3.	SAARC Forestry Centre (SFC)	Thimphu	Bhutan
4.	SAARC Documentation Centre (SDC)	New Delhi	India
5.	SAARC Disaster Management Centre (SDMC)	New Delhi	India
6.	SAARC Coastal Zone Management Centre (SCZMC)	Malé	Maldives
7.	SAARC Information Centre (SIC)	Kathmandu	Nepal
8.	SAARC Tuberculosis and HIV/AIDS Centre (STAC)	Kathmandu	Nepal
9.	SAARC Human Resources Development Centre (SHRDC)	Islamabad	Pakistan
10.	SAARC Energy Centre (SEC)	Islamabad	Pakistan
11.	SAARC Cultural Centre (SCC)	Colombo	Sri Lanka

Table 1.1: SAARC Regional Centres

1.1.2 Reorganization of the Regional Centres

With effect from December 2015, the following decisions are being implemented for the reorganization of the SAARC Regional Centres:

- a. Centres to be dissolved
 - Information Centre in Kathmandu,
 - Human Resource Development Centre in Islamabad, and
 - Documentation Centre in New Delhi.
- b. Centres to be merged into one centre
 - SAARC Forestry Centre in Thimphu,
 - Disaster Management Centre in New Delhi,
 - Coastal Zone Management Centre in Male, and
 - Meteorological Research Centre in Dhaka.
- c. Centre to be created

- SAARC Environment and Disaster Management Centre

The move aims to end the duplication of work carried out by the regional Centres and to economize the budget of the centres; the decision brings down the total number of regional Centres from eleven to five.

The regional centers are managed by Governing Boards comprising representatives from the SAARC Member States, SAARC Secretary General and the Ministry of Foreign Affairs of the host government. The Director of the centre acts as Member Secretary to the Governing Board, which reports to the Standing Committee through Programming Committee.

1.1.3 Introduction to SAARC Energy Centre

Energy cooperation is one of the most important drivers for the SAARC process leading to durable peace and prosperity in the Region. SAARC Energy Centre [2] (SEC) was created through the Dhaka Declaration, in 2005, as a special purpose vehicle to realize the vision of SAARC leaders to establish an Energy Ring in South Asia. It started its journey from 1st March 2006 in Islamabad, Pakistan. SAARC energy cooperation programme provides a major substantive element for economic prosperity of South Asia towards satisfaction of energy demand of the Member States. SEC is converting energy challenges into opportunities for development. It is a platform involving officials, experts, academia, environmentalists and NGOs to tap the potential of cooperation in energy sector including development of hydropower, renewable and alternative energy, promoting technology transfer, energy trade, energy conservation and efficiency improvement in the region. This regional institution of excellence for the initiation, coordination, and facilitation of SAARC initiatives in energy enables the stakeholders to come together for meeting the energy challenges being faced by the SAARC Member States.

Since inception, SEC has carried out a number of activities including pilot/special projects, short term research studies, dissemination and capacity building initiatives. These initiatives have been targeted at five thematic areas as highlighted in the Figure 1.1 and are listed below:

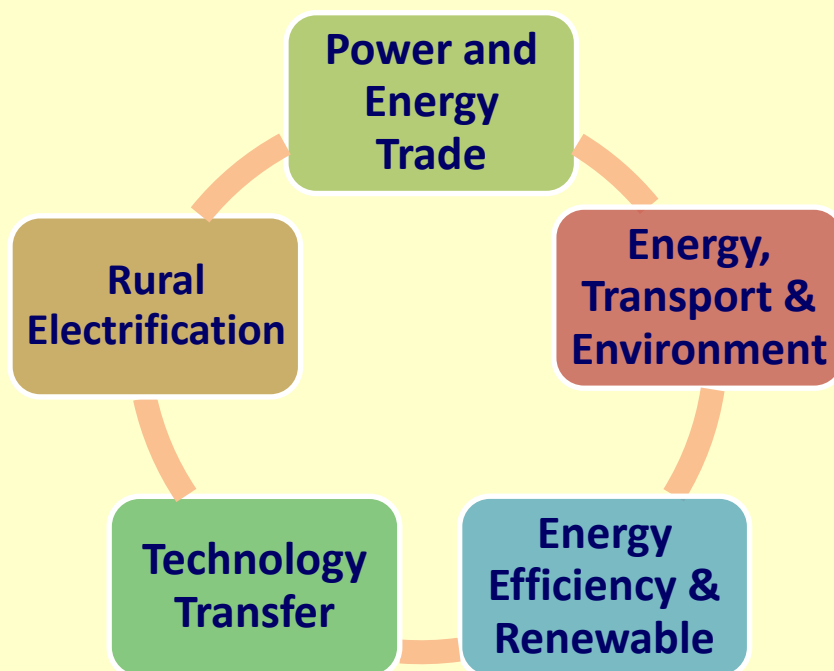


Figure 1.1: Illustration of SEC Thematic Areas

- a. Programme on “Energy Trade between SAARC Countries” (PENT);
- b. Programme on “Integrated Assessments of Energy, Transport and Environment” (PETREN);
- c. Programme to “Minimize Oil Imports (PROMO) through Improvements in Energy Efficiency and Fuel Substitution”;
- d. Programme to “Successfully Implement Technology Transfer” (POSIT); and
- e. Programme on “Rural Electricity for Poverty Alleviation” (PREPA).

1.1.4 Historical Background to the Establishment of SEC

The 12th SAARC Summit held at Islamabad [3] on 4-6 January 2004, decided to set up a Working Group on Energy (WG/E) with the mandate of creating South Asian energy cooperation including the concept of an Energy Ring. Pakistan offered to host the Working Group and was elected its Chairman for 5 years. The WG/E is meant to prioritize the subjects to be addressed within the framework of creation of energy cooperation in South Asia and formulate its work Programme. The WG/E submits its reports and recommendations to the SAARC Council of Ministers through the Standing Committee.

The 1st Meeting of the WG/E, held on 15-16 June 2004 at Islamabad, recommended the plan of action for regional energy cooperation including, *inter alia*, the possibility of setting up a SAARC Energy Centre.

The 1st Meeting of SAARC Energy Ministers (Islamabad, 1st October 2005) approved the Concept Paper on Establishment of SAARC Energy Centre prepared by the 2nd meeting of the WG/E and agreed on the establishment of a SAARC Energy Centre in Pakistan so as to achieve the objectives of creating an Energy Ring in South Asia. During the 13th SAARC Summit held in Dhaka in November 2005, the Head of States agreed to establish the SAARC Energy Centre in Islamabad to promote development of energy resources, including

hydropower; and energy trade in the region; to develop renewable and alternative energy resources; and to promote energy efficiency and conservation in the region. Subsequently, SAARC Energy Centre was established at Hydrocarbon Development Institute of Pakistan (HDIP) campus and Director General, HDIP was appointed its Director with effect from 1st March 2006. The increased work and human resource necessitated shifting of SEC to a hired accommodation: House No. 697, Street No. 43, Sector E-11/4, National Police Foundation, Islamabad, Pakistan.

1.1.5 SEC Organizational Structure

The structure of an organization enables it to deliver as per its mandate through achievement of its pre-set objectives and goals. The organogram of SEC is provided in Figure 1.2.

1.1.6 Vision

The SEC is envisioned as a catalyst for the economic growth and development of the South Asian region by initiating, coordinating and facilitating regional as well as joint and collective activities on energy.

1.1.7 Mission

The SEC will provide technical inputs to the SAARC Working Group (and other) meetings on energy, and will facilitate accelerating the integration of energy strategies within the region by providing relevant information, state-of-the-art technology and expertise.

1.1.8 Overall Objective

The overall objective for the establishment of the Centre is to have a regional institution of excellence for the initiation, coordination and facilitation of SAARC programmes in energy.

1.1.9 Goals

- a. Strengthen South Asia's capacity to collectively address global and regional energy issues.
- b. Facilitate energy trade within the SAARC region, through the establishment of a regional electricity grid and natural gas pipelines.

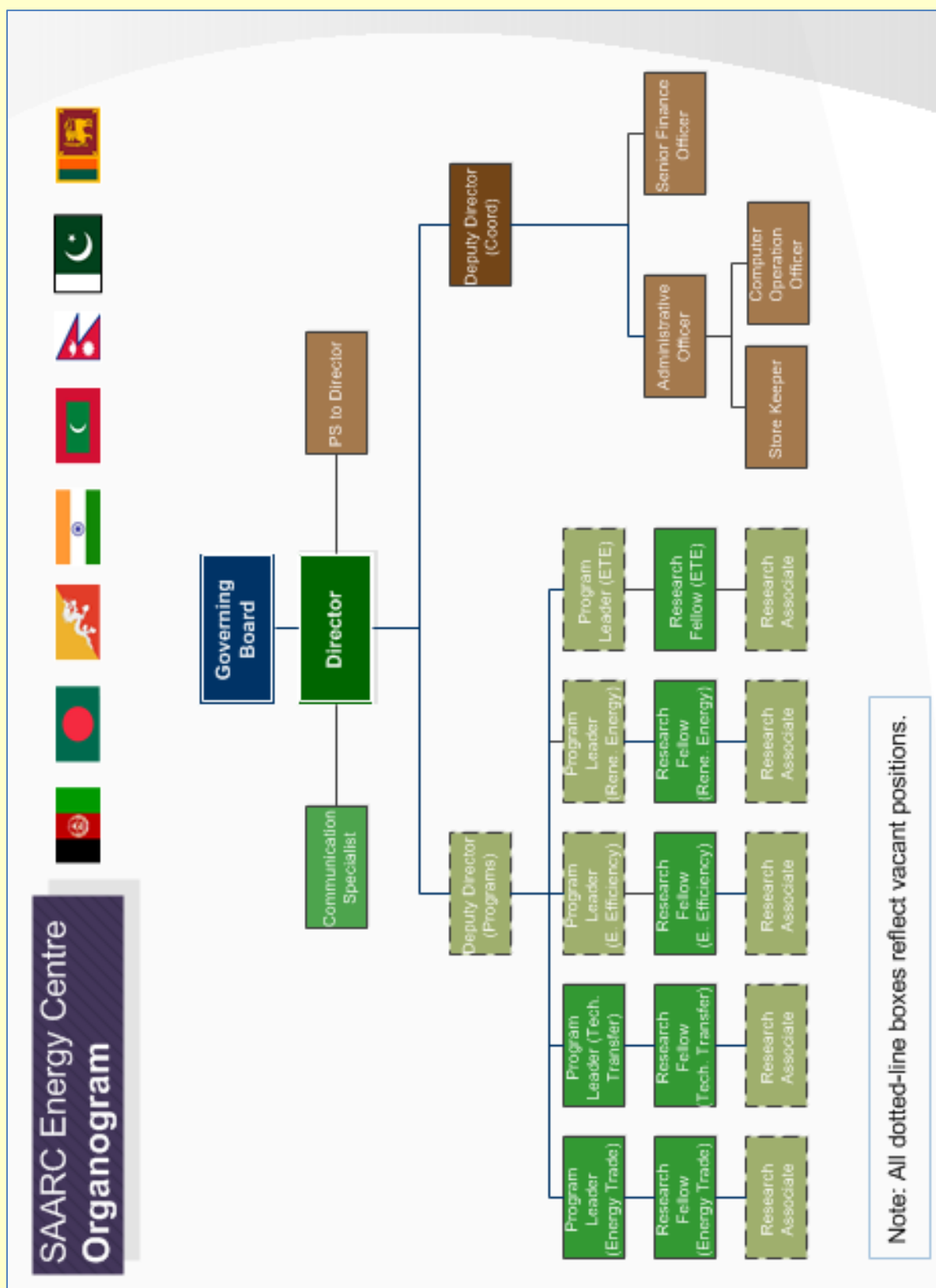


Figure 1.2: Organogram of SEC

- c. Promote more efficient use of energy within the SAARC region.
- d. Enhance cooperation in the use of new and renewable energy sources in the Region, thereby contributing towards more sustainable development in the SAARC Member States.
- e. Serve as a focal point for providing reliable energy data for the individual Member States and the Region.
- f. Enhance SAARC expertise in energy development and management.
- g. Promote private sector investment and participation in energy activities in the Region.
- h. Undertake programmes to achieve the goals mentioned above.

1.2 SEC Programme Directions

As per its mandate, SEC has a certain hierarchy for its programme directions. Figure 1.3 illustrates the prevailing hierarchy being followed by the SEC for designing its strategic and action plans:



Figure 1.3: SEC Programme Directions

1.3 Programme Activities Executed by SEC

The SEC has undertaken quite a few, diversified Programme activities since its inception in the year 2008; a complete list is available as Annexure 1. An abstract of the Programme activities is provided in Table 1.2.

Activity	2008	09	10	11	12	13	14	15	2016	Total
Studies	1	1	2	3	2	5	5	9	2	30
Workshops	3	4	2	3	6	8	5	4	13	48
Pilot/ Special Projects					1	1		2	2	6
Total	4	5	4	6	9	14	10	15	17	84

Table 1.2: Abstract of SEC Programme Activities

1.4 Rationale for the Study

Every dynamic organization would like to delve deep into its own effectiveness that is what is in front of the SEC while commissioning this Study. The very rationale of the Study is to have an in-depth look into SEC's contribution, since its inception, the impact it has been able to make, and to ascertain whether the impact made by the Centre through its activities is in line with its Vision and Mission. The Study, while assessing the impact, is meant to identify the shortcomings that the Centre is to make up, building upon its strengths.

1.5 Aims and Objectives

Impact assessment may be defined and determined in a number of ways. For instance, International Federation of Red Cross and Red Crescent Societies consider an Impact Assessment in the following words: "a means of measuring the effectiveness of organizational activities and judging the significance of changes brought about by those activities. It is both art and science. Impact assessment is intimately linked to Mission, and, in that sense, ripples through the organization" [4].

The SEC Impact Assessment Study (hereinafter referred to as "the Study") was envisaged by the Governing Board of SEC in its 9th Meeting held on 11-12 September, 2014, and was designed to assess the impact of the program activities of SEC with the following aims:

- Reviewing SEC's initiatives undertaken since its inception;
- Assessing the impacts of the Centre's initiatives; and
- Proposing a way forward for future activities of SEC

The Study aims to critically analyse the contribution of SEC in realizing its vision. This also includes a thorough assessment of various interventions carried out by SEC in terms of its intended impact, as well as SEC's prevailing methodology for execution of its activities such as studies, workshops, seminars, pilot projects and networking events. The Study culminates with the proposed next five-year Strategic Plan for SEC (covering years 2017-21) building upon the lessons learnt through the evaluation and interactions conducted for the very purpose of this Study. More specifically, the SEC aims to achieve the following objectives through this Study:

- a. Assess the impact of SEC's interventions for defining the next strategic roadmap with an improved vision and the emerging criticality in terms of regional energy security and sustainability;
- b. Critically assess the contribution by SAARC Energy Centre in materializing the vision given by SAARC leaders' pertaining to SAARC Energy Ring;
- c. Establish SEC's Knowledge Resource Bank comprising of an up to date SEC activities and relevant data/information archive (Concept Papers; Study Reports; Reports of Workshops, Seminars, Pilot/Special Projects; Reports of SAARC Meetings including of SAARC Summit, Working Group, Expert Group, Governing Board Meetings; reports on interaction with the partner/networking organizations, etc.) to be maintained in the soft version and to be accessible to the SEC's professionals and other registered regional professionals through internet;
- d. Review the SEC's prevailing methodology i.e. practices, standards and procedures for execution of its action plan activities including studies, workshops, seminars, Pilot/Special projects, as well as networking with relevant regional and international entities;; and
- e. Develop SEC's 5-year strategic plan based on the lessons learnt through networking, research and knowledge sharing activities conducted during the last eight years

1.6 Methodology

This section aims to outline the procedures and methods that the Study Team employed in carrying out the Study. It assessed the scope of the task and broke it down into several components for project management purposes which were then fed into the overall skeleton of the Study, as illustrated in the Figure 1.4.

The Study uses an approach closer to Logical Frame Approach (LFA) for impact evaluation. LFA is used for planning, monitoring and evaluation of development projects. It provides a gist of the planned activities which helps in the assessment of impact. LFA assesses the Impacts, Objectives and Outcomes, Outputs, etc. of any project or programme. [5] SEC's activities therefore are being assessed in line with this approach explaining outcome of the activities (seminars, workshops/studies) and their assessed impact.

The Team also understands that the results of interventions i.e. Outputs and Outcomes are not directly or fully within the control of the entity i.e. SEC in this case. Hence, it would be more appropriate to emphasize on SEC's efforts and contribution should also be measured in terms of inputs it was able to manage for the activities. Due to non-availability of exhaustive data of program activities, assessments in terms of inputs have been made for a few of the program activities. However, it is strongly recommended that SEC should include input in its regular as well as annual impact assessment along with other variables.



Figure 1.4: Overall Process of the Study

Assessment Criteria

SEC, over the time period in consideration, has carried out its mandate in the identified program areas. The program activities are expected to feed into the overall goals and objectives of SEC. The SEC Impact Assessment Study Team (hereinafter referred to as the Team) assessed these activities and how they feed into the programs of SEC. Before progressing into an in-depth discussion of the Study results, it is important that the criteria used for impact assessment are also discussed. The rationale behind this includes:

- a. Understanding by stakeholders regarding the methodology used;
- b. Transparency in respect of assessment of SEC programs; and
- c. A point of reference for future assessment studies that should be conducted on a regular basis.

Stakeholder Identification

The process of impact assessment starts by identifying stakeholders that have been involved and/or targeted by the program activities of SEC. These stakeholders were identified as follows:

- a. Delegates from the Member States who have participated in the program activities of SEC;
- b. Experts and Resource Persons engaged for SEC's program activities;
- c. Short Term Consultants and Professionals who are currently or have a history of having worked with SEC;
- d. Officials of the Member States related to SEC including members of the SEC Governing Board; and
- e. Current SEC Professionals

Introduction to the Causal Chain for SEC Impact Assessment

A causal chain is the path of influence running from a root cause to problem symptoms. Each link in the chain represents something in the real world. At one end of the chain is the root cause. At the other end is (are) the symptom(s) it causes. [6] There are certain steps involved in developing the link from program activities conducted by SEC to the impact of these activities. These steps are linked to each other in the form of a causal-chain. A feedback model could later be combined with an impact assessment to observe and record the impact and make corrective actions based on the results of the impact assessment.

The sequential steps followed for the impact assessment made are as follows:

- a. Input
- b. Output
- c. Outcomes
- d. Impact Assessment against customized KPIs
- e. Feedback

Figure 1.5 shows how these activities are linked together:

The purpose of the Study is to assess the impact of the SEC interventions based on the variables such as Inputs, Outputs and Outcomes of its performed activities. Inputs by the SEC Team with reference to a particular intervention may include design of workshop/seminar, identification of quality resource persons/experts, etc. Outputs would refer to the tangible results that are produced by the program activities such as:

- a. Number of trainings organized;
- b. Number of professionals trained; and
- c. Research activities and publications

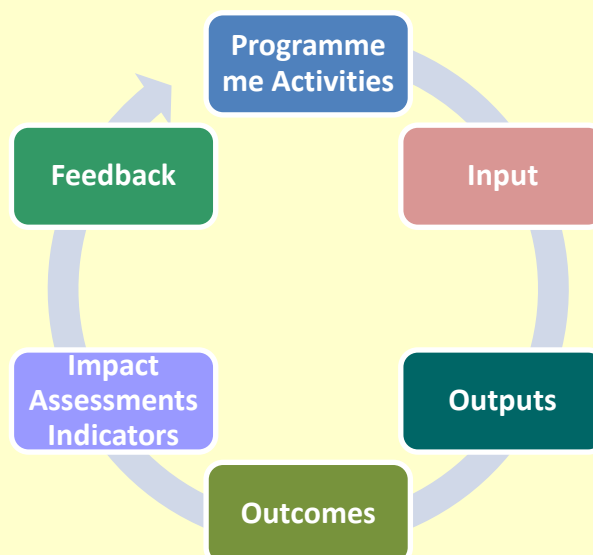


Figure 1.5: Causal Chain for SEC Impact Assessment

Programme activity outcomes are classified as the changes observed amongst the targeted audience of the SEC or their environment. As a result, the impacts are being classified as end results which are further measured and assessed against a set of five indicators. A measurement of these would help evolve a comprehensive picture of the effectiveness of

SEC in meeting its goals and objectives. The process has been further elaborated in Table 1.3:

Point of Measurement	What is being Measured	Indicators
Input	Value	Resource in terms of event design, professionals expertise managed and shared knowledge
Output	Effort	Implementation of Activities
Outcome	Effectiveness	Use of Outputs and Sustained Production of Benefits
Impact	Change	Difference from the Original Problem Situation

Table 1.3: Classification of the Effectiveness of SEC

The Team evaluated the above points of measurement to give a comprehensive picture of the performance of SEC and its impact on the energy sector of the Member States. However, due to lack of data, the variable Input has been reviewed exclusively for the seminars/workshops organized during the FY 2015. As already highlighted, Output would correspond to number of trainings organized, number of professionals trained and research activities and publications. It is suggested that SEC should maintain a database/archive of its interventions in a more formalized way. It will help SEC in better planning besides facilitating proper input for future exercises of impact assessments.

Key Performance Indicators

After the necessary data and feedback gathered from the relevant stakeholders and the development of a database of all documents pertaining to SEC activities, a comprehensive review of all the information was carried out on the basis of the following parameters:

- Relevance– the extent to which the SEC programmes have been focused on target groups as well as the needs and priorities of the Member States.
- Quality and Effectiveness – the extent to which the objectives of each of the SEC programmes and activities have been attained or are likely to be attained.
- Coherence – the extent to which the programmes, activities and interventions carried out by SEC have conformed with or diverge from the broader goals and vision of the Centre.
- Sustainability – the extent to which the activities, results and effects can be expected to continue after the end of SEC involvement.
- Participation – the extent to which stakeholders were involved in the design, planning and implementation of SEC programmes and activities.

The purpose of such assessment is to take account of past activities, generate and communicate information on the outcomes and impacts of past activities, and obtain inputs for future decision and policy-making.

The impact of the SEC programmes and activities has been assessed by using the set of five indicators (listed above) that take into account the context of the work, its goals and the areas on which it is projected to have an impact. Consequently, the evaluation was carried out in the form of a systematic and objective evaluation of completed SEC activities to determine the effectiveness of the interventions and the impact and usefulness of the outcome, including its sustainability in the longer run.

Tools and Techniques Utilized

After developing the Study methodology and identification of the stakeholders, the Team gathered feedback from them.

Methods of Feedback Collection

For the purpose of this Study, the following instruments have been employed for gathering valuable feedback from relevant stakeholders:

- a. Feedback Survey Form; circulated amongst all relevant stakeholders;
- b. One-on-one interviews; assessed feedback from the survey forms; and
- c. Focused group discussions; held with the SEC Team for key matters pertaining to the Study

The feedback that is crucial to the success of this Study has been collected from the following categories of stakeholders:

- a. Delegates from the Member States,
- b. Experts and Resource Persons engaged for the SEC's previous programme activities,
- c. Short Term Consultants and Professionals having a working history with SEC, and
- d. SEC through Programme Coordinator

Collection and Collation of Data

The Team collected and referenced documentation detailing the activities of the SEC. This data set has been used at various points during the course of the Study. The key documentation collected from SEC included:

SEC – First Strategic and Operational Plan:

Documented in the form of a report by Mr. Tofiq A. Siddiqui, this plan was published on 13th September, 2006, and consists of an introduction to the energy sector of the SAARC region and compiled recommendations that feed into the overall plans of SEC.

Governing Board Meetings:

Reports on annual meetings of the SEC Governing Board provided an insight into the progress of SEC over the years.

Calendar of Activities:

The annual plan of SEC activities is prepared and approved in the second half of each calendar year. All annual programmes were reviewed in terms of activities planned and actually executed.

Data Regarding Programme Outputs

Though not formally documented in a particular form, the information was largely deciphered from a variety of sources such as direct information provided by SEC Programme Coordinator, feedback forms and interviews.

Reports on Programme Activities

SEC generates a programme activity report at the end of each event detailing its proceedings. The report on a recent activity conducted on 29-30 April, 2015 on “Designing Management & Monitoring Framework for Regulatory Compliance by Power Transmission Utilities in the SAARC Region” has been reviewed as a sample.

Procedure for Selection of Experts for carrying out Programme Activities

This set of documents gives an insight into the procedures used by SEC for the selection of experts for conducting programmes and studies, which includes the following:

- a. Template for Programme Activity Concept Paper (Available as Annexure - 2)
- b. Advertisement for Hiring of Expert (Available as Annexure - 3)
- c. Template for CV/Resume (Available as Annexure - 4)
- d. Evaluation Criteria and Sheet (Available as Annexure - 5)
- e. Sample Notice to Proceed (Available as Annexure - 6)

Studies and Publications

SEC has produced a number of studies and publications within the ambit of its thematic areas; all of these studies are available on its website. Some of the studies include, but are not limited to, the following:

- a. Integrated Energy Potential of South Asia: Vision 2020;
- b. Improved Cooking Stoves in South Asia;
- c. Cogeneration Opportunities in Sugar and Paper Industries in SAARC Member States;
- d. Assessment of Energy Efficiency Potential through Energy Audit on Power Transmission and Distribution Grid Stations;
- e. Review of Electricity Laws and Regulations of SAARC Member States;
- f. Study on a South Asia Regional Power Exchange (with assistance by ADB);
- g. SAARC Energy Data Book 2001-11;
- h. SAARC Action Plan on Energy Conservation;
- i. Pricing Mechanism for Oil and Gas in SAARC Member States; and
- j. Pricing Mechanism for Electricity in SAARC Member States

The review of the above studies helped the Team in analysing the role that the SEC has played in each of its thematic areas when it comes to conducting research in various niche areas of energy. Detailed analysis of some of these studies has been incorporated in separate reviews of each of the thematic areas in the subsequent sections of the Study.

Other Data

The SEC Programme Coordinator provided other relevant data and the Team also fetched important data from the SEC website www.saarcenergy.org.

Dropbox Account for Data Sharing

A Dropbox account was set up by the Team in order to collate this data. After the completion of the Study, feedback received from stakeholders surveyed and interviewed was handed over to the SEC. This account can be accessed using the following details.

Website: www.dropbox.com
Username: secteam@powerplannersint.com
Password: @secteam#

1.7 Illustrated Summary of SEC Impact Assessment Methodology

The salient features of activities undertaken for the Study are illustrated in Figure 1.6:

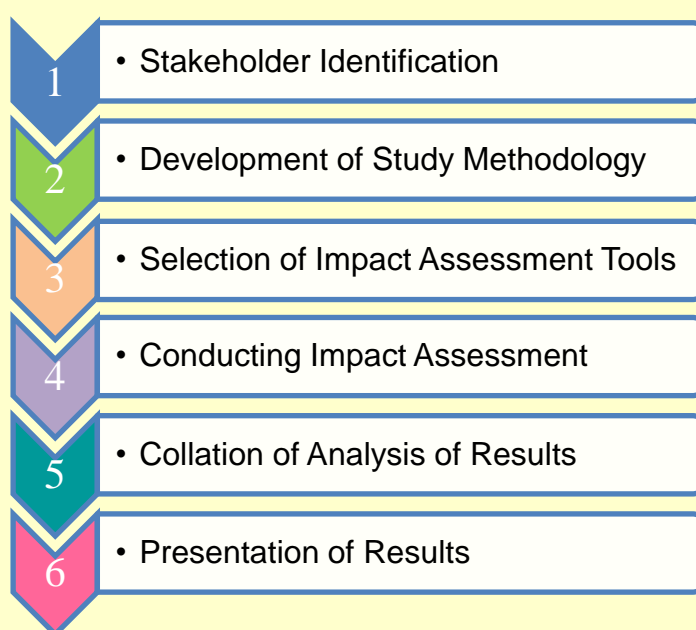


Figure 1.6: Flowchart of SEC Impact Assessment Methodology

2. Programme on “Energy Trade between SAARC Countries” (PENT)

2.1 Background/Purpose

The Programme on Energy Trade between the SAARC Countries was established in view of its emphasis on trade in electricity, natural gas and technology across the SAARC region. The cooperation amongst the SAARC Member States is spearheaded by the concept of an Energy Ring.

The Energy Ring was envisaged in view of the large dependence of all SAARC countries on oil imports. Since these imports come from outside the SAARC Region, this puts heavy strains on the economies of the Member States. The Energy Ring seeks to take advantage of the number of opportunities available in the Region for promoting the flow of electricity and natural gas in the Region, as well as transfer of energy technology gained bilaterally to multi laterally, under mutually agreed terms.

The energy flows (electricity) have been summarized in a conceptual Energy Ring, as shown in Figure 2.1. In its early years, it was proposed that SEC would examine current obstacles to developing energy flows in the Region, identify the quantitative and qualitative benefits that could accrue to the individual Member States from the implementation of the Ring, and suggest ways to facilitate its implementation [7]. Figure 2.2 reflects Energy Ring showing the flows of natural gas within the Region.

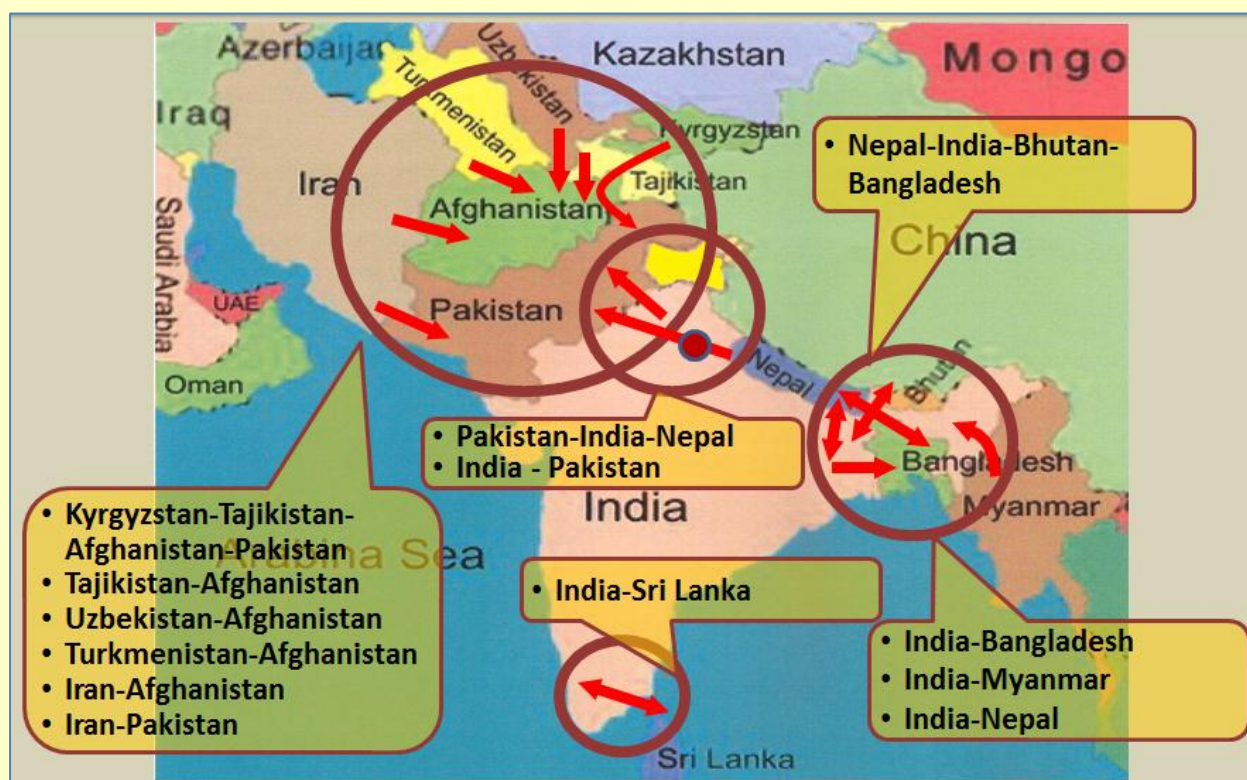


Figure 2.1: SAARC Energy Ring - Electricity Grid

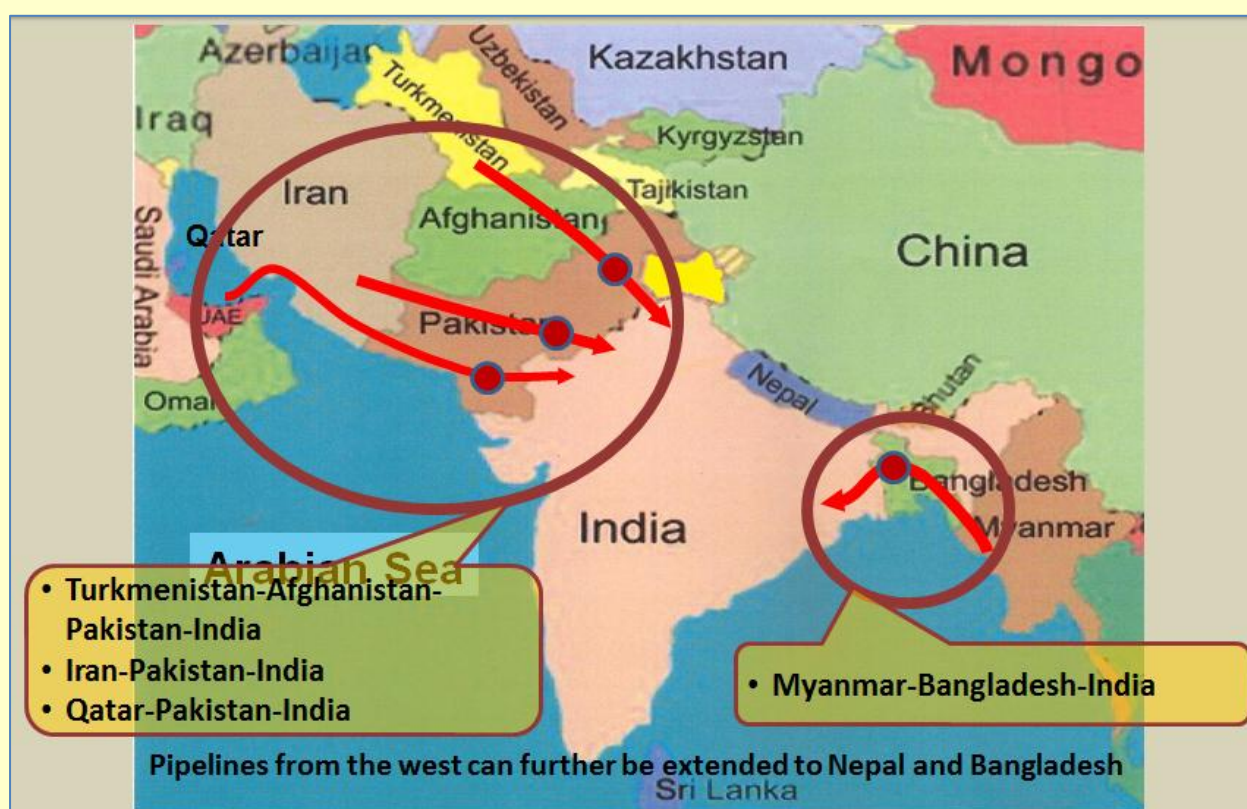


Figure 2.2: SAARC Energy Ring - Gas Grid

2.2 Nature and History of Past Activities

Since its inception, the SEC has organized a number of activities under PENT. These programme activities, including studies, seminars and workshops, are listed down in Table 2.1.

#	Reference	Programme Activity
1.	PRG - 24 / 2011 / PENT	Study on Review of Existing Documents for the Selection of Regional Hydro Power Plants in Bhutan and Nepal
2.	PRG - 29 / 2011 / PENT	SAARC Workshop on Cross-border Electricity Interconnection
3.	PRG - 33 / 2012 / PENT	Study on Pricing Mechanism for Oil and Gas (including LNG and LPG) in SAARC Member States
4.	PRG - 46 / 2013 / PENT	Pre-feasibility study for setting up SAARC Regional/Sub-regional Coal Based Power Plant
5.	PRG - 49 / 2013 / PENT	Study on Pricing Mechanism of Electricity in SAARC Member States
6.	PRG - 50 / 2013 / PENT	SAARC Energy Data Bank
7.	PRG - 53 / 2013 / PENT	SAARC Workshop on Experience Sharing of Construction, Operation and Maintenance of LNG

#	Reference	Programme Activity
		Facilities
8.	PRG - 54 / 2013 / PENT	SAARC Dissemination Workshop on Review of Electricity Laws and Regulatory Frameworks of Member States
9.	PRG - 57 / 2013 / PENT	SAARC Seminar on Role of Private Sector in Regional Power Trade
10.	PRG - 59 / 2014 / PENT	Study on Designing Management and Monitoring Framework for Regulatory Compliance by the Power Transmission Utilities in the SAARC Region
11.	PRG - 60 / 2014 / PENT	Study for Development of a Potential Regional Hydro Power Plant in South Asia
12.	PRG - 61 / 2014 / PENT	SAARC Energy Data Bank
13.	PRG - 62 / 2014 / PENT	SAARC Workshop on Harmonizing Regulations and Policies for Cross Border Power Trade, Risk Sharing and Financial Settlement Issues
14.	PRG - 70 / 2015 / PENT	Feasibility Study for Setting Up SAARC Regional / Sub-regional LNG Terminals
15.	PRG – 72 / 2015 / PENT	SAARC Energy Data Bank 2002 -12
16.	PRG – 75 / 2015 / PENT	Study on Harmonizing Transmission Grid Codes of SAARC Member States to Combat Regulatory Challenges for Intra-region Power Trading / Interconnections
17.	PRG – 80 / 2015 / PENT	SAARC Dissemination Workshop on Study for Designing Management and Monitoring Framework for Regulatory Compliance by Power Transmission Utilities in the SAARC Region

Table 2.1: Programme Activities under PENT

2.3 Assessment of PENT Activities

Activities carried out under the thematic area of PENT have been assessed based on analysis of the outcome and impact.

2.3.1 Summary of Outputs under the PENT Programme

Chart 2.1 summarizes the activities conducted under the PENT Programme.

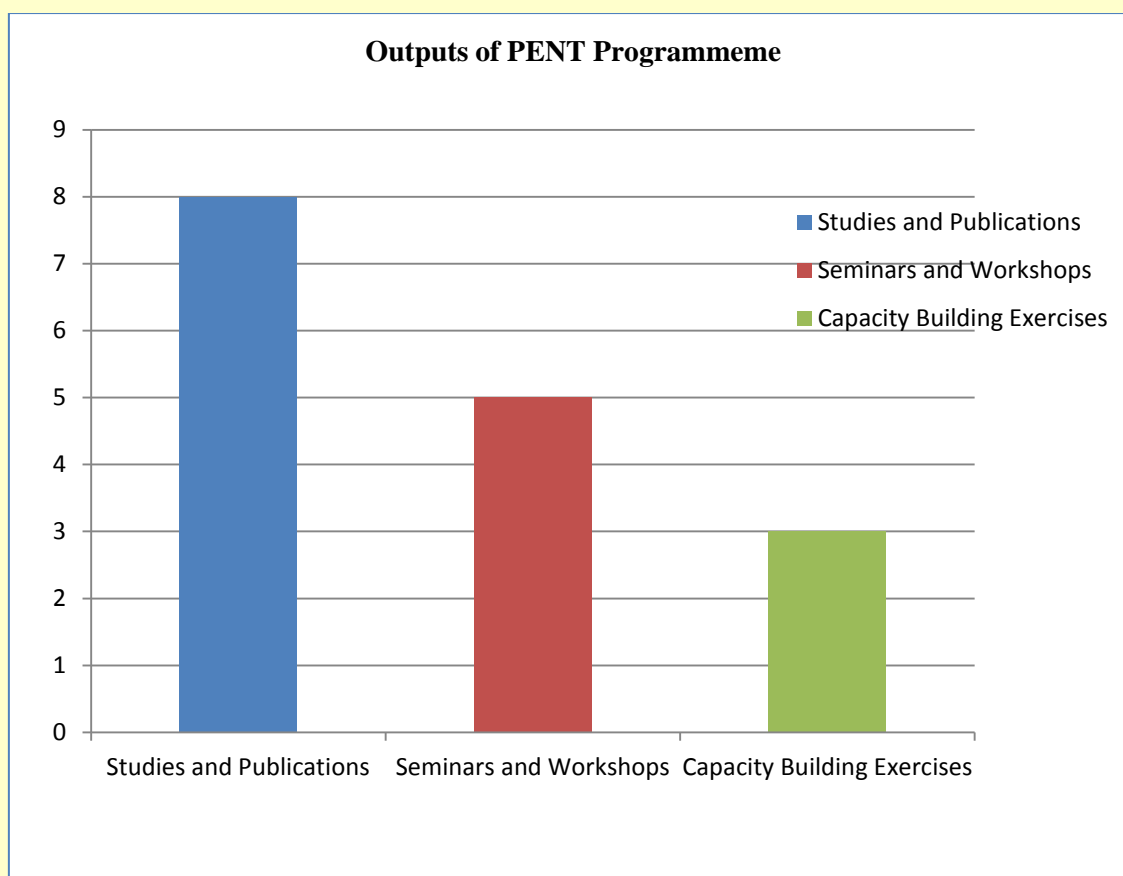


Chart 2.1: Outputs of PENT Programme

2.3.2 Research Activities under PENT

A list of research activities carried out by SEC under thematic area PENT are highlighted in Table 2.2:

Review of Existing Documents for Selection of Regional Hydro Power Project Plants	
Proposed in FY	2011
Completed in FY	2011
Outcome	Study provided information to the policymakers of SAARC Member States for taking action in the implementation process of SAARC Energy Ring through SAARC Power Grid.
Impact	Created opportunities for optimum utilization of untapped regional hydro resources.
Study on Pricing Mechanism for Oil and Gas in SAARC Member States	
Proposed in FY	2012
Completed in FY	2012

Outcome	Shared experiences of Member States on prevailing Pricing Mechanisms for Oil and Natural Gas. Overall policy perspective on pricing, role of oil and natural gas in the energy system of each Member State, evolution of pricing mechanisms and institutional and regulatory set up have also analysed.
Impact	Helped the Member States to formulate policies in their respective countries for the promotion of energy trade in SAARC Region.
Pre-feasibility Study for Setting up SAARC Regional/Sub-regional Coal Based Power Plants	
Proposed in FY	2013
Completed in FY	2013
Outcome	Examined the scope and viability of coal-fired power plant(s) at sub-regional or regional level so as to enable initial clearance and approval of competent authorities and undertaking of detailed technical/feasibility studies
Impact	<ul style="list-style-type: none"> Enhanced usage of coal in the Member States; Promoted regional energy cooperation through energy trade; Meeting the increasing energy demand through exploitation of indigenous (regional) coal resources; Reduction in oil imports; Contributed toward improvement in energy security of the Region.
Study on Pricing Mechanism for Electricity in SAARC Member States	
Proposed in FY	2013
Completed in FY	2013
Outcome	<ul style="list-style-type: none"> Shared the experiences in the area of pricing mechanisms for Electricity in SAARC Member States. Completed as an in-house effort of SEC and covered five SAARC Member States namely Bangladesh, Bhutan, India, Pakistan and Sri Lanka. The study focused on the prevailing electricity pricing practices in the SAARC Member States. It mainly covered generation, transmission, distribution and retail supply tariff determination methodologies that are being adopted by the Member States. The theoretical aspects of electricity pricing and institutional, legal and regulatory setup of each Member State were also described.
Impact	Helped the SEC Member States to better articulate mechanisms for electricity pricing in keeping practices

	adopted across the SAARC Region.
SAARC Energy Data Bank	
Proposed in FY	2013
Completed in FY	2013
Outcome	<ul style="list-style-type: none"> The Databank and the Data Book comprised of 282 tables, covering timeline of ten years (i.e., 2001-2010) that comprised the following sections: <ul style="list-style-type: none"> Energy Balances, Energy Production and Supply, Energy Consumption, Energy Resources and Reserves Electricity Installed Capacity, Production, Trade & Supply This data would help in facilitating and promoting regional Energy Cooperation in the Member States
Impact	This enabled the SEC in keeping all their energy data records in one place, for easier access to future references to be used by professionals across the Region for diversified references.
Study on Designing Management and Monitoring Framework for Regulatory Compliance by Power Transmission Utilities in SAARC Region (Pakistan)	
Proposed in FY	2014
Completed in FY	2014
Outcome	The study proposed a compliance management and monitoring scheme to facilitate the power transmission utilities in the SAARC region.
Impact	<ul style="list-style-type: none"> Provided a roadmap for Utility's compliance with its legal and regulatory requirements Provided a managing and monitoring tool for the Regulator as well as the Utility
Study for Development of a Potential Regional Hydro Power Plant in South Asia (Pakistan)	
Proposed in FY	2014
Completed in FY	2014
Outcome	A pre-feasibility study for development of a large, regional hydro power plant in South Asia focusing on over 80,000 MW hydropower, potential of Nepal. The power generated in Nepal would be transported to India, Pakistan and Afghanistan, establishing and strengthening a great bond, based on the mutual interest, between the four Member States where India,

	Pakistan and Afghanistan would be benefitted with the cheap hydropower whereas Nepal would earn foreign exchange owing to its potential. Of course India and Pakistan would also be benefitted in terms of wheeling.
Impact	The study motivated the Member States to think beyond bilateral power interconnections and thus contributed towards the concept of SAARC Energy Ring – the ultimate objective of SEC.
Feasibility Study for Setting Up SAARC Regional / Sub-regional LNG Terminals	
Proposed in FY	2015
Completed in FY	2015
Outcome	A pre-feasibility study report for leading to setting up and operating SAARC Regional/Sub-Regional LNG Terminals, primarily meant to capitalize on the relevant Indian experiences.
Impact	The study report is to be finalized and published during the FY 2016 once the draft report is disseminated through video conferencing/webinar. However, it is expected to further the concept of SAARC Energy Ring and urge the Member States to think 'regionally'.

Table 2.2: Research Activities under PENT

2.3.3 Seminars and Workshops held under PENT

SAARC Workshop on Cross-border Electricity Interconnection, Bhutan	
Proposed in FY	2011
Completed in FY	2012
Number of Participants	44
Outcome	Helped develop capacity and understanding of Member States professionals in the areas of Cross-Border Electricity Interconnection, Project Development, System Design and Implementation, and System Operation and Management.
Impact	Helped in realize the aim of developing energy ring among SAARC Member States.
SAARC Workshop on Experience Sharing on Construction, Operation and Maintenance of LNG Facilities, India	
Proposed in FY	2013
Completed in FY	2014

Number of Participants	44
Outcomes	Facilitated sharing of knowledge and best practices in the area of construction, operation and maintenance of LNG facilities among the SAARC Member States.
Impact	Member States learnt handling of LNG facilities, thus the workshop enabled them to prepare for sustainable energy supplies.
SAARC Dissemination Workshop on Review of Electricity Laws and Regulatory Frameworks of Member States, Sri Lanka	
Proposed in FY	2013
Completed in FY	2013
Number of Participants	30
Outcome	<ul style="list-style-type: none"> • Study was conducted under Japan SAARC Special Fund for reviewing electricity laws, acts and regulations of the SAARC Member States. • Identified legal barriers and had suggested reforms in the existing laws and regulatory frameworks of the Member States to facilitate energy trade in the region. • The dissemination workshop deliberated on the main topics and recommendations of the study and prepared a way forward and action plan for consideration of the Member States
Impact	<ul style="list-style-type: none"> • Harmonization of electricity laws and regulations, promotion of cross border electricity trade • Creation of cross border electricity infrastructure, within the region and with neighbouring regions to meet the electricity demand for accelerated pace of economic growth of the Member States.
SAARC Seminar on Role of Private Sector in Regional Power Trade, New Delhi	
Proposed in FY	2013
Completed in FY	2013
Number of Participants	60

Outcome	<ul style="list-style-type: none"> Recommended SAARC Energy Centre to prepare a 20-year Perspective Plan of the needs of electric power of all the SAARC Member States together with investment requirements. Such a plan would help the Member States in charting their strategies for the developments of their respective power sectors jointly and severally and to balance their import/export potential in regional power trade. The Seminar also recommended that the current cooperation of SEC with the Independent Power Producers Association of India (IPPAI) may continue to focus on specific issues like grid security, technical, commercial and regulatory aspects of regional power trade in the SAARC region.
Impact	Helped identifying challenges for meeting needs of the SAARC Member States and enabling affirmative actions for their solution.
SAARC Workshop on Harmonizing Regulations and Policies for Cross Border Power Trade, Risk Sharing and Financial Settlement Issues, Nepal	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	91
Outcome	It was recommended that the Electricity Laws and Regulations may be amended at country level or through a regional framework at SAARC level ratified further by all Member States.
Impact	<ul style="list-style-type: none"> Assisted the SAARC Member States think through long term regional strategies for maximizing the usage and potential of the regional power market. Promoted and created linkages of a regional power market and regional connectivity.

SAARC Dissemination Workshop on Study for Designing Management and Monitoring Framework for Regulatory Compliance by Power Transmission Utilities in the SAARC Region, Sri Lanka	
Proposed in FY	2015
Completed in FY	2015
Number of Participants	44
SEC's Input	<ul style="list-style-type: none"> • SEC's Knowledge Partner: Ceylon Electricity Board, Sri Lanka. • Delegates from seven Member States including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka joined this workshop. • Purpose of this workshop was to disseminate the SAARC Study for Designing Management and Monitoring Framework for Regulatory Compliance by Power Transmission Utilities' commissioned by SEC in FY 2014. • SEC Consultants M/s Hassan Jafar Zaidi and Omair Khalid from Power Planners International, and Mr. Salis Usman, SEC Programme Coordinator shared the study report for a detailed discussion. Mr. Rashid Aziz, Former Energy Specialist of World Bank presented his case as the Peer-Reviewer. The study report was discussed and improved after a comprehensive and lively debate on different aspects of the proposed framework. • The workshop comprised four technical sessions including i) 'Setting the Perspective'; ii) 'SAARC Regulatory Compliance Intervention'; iii) 'Proposed Monitoring; and Managing Compliance Framework'; and iv) 'Study Recommendations and Peer Review Process'.
Outcome	The workshop recommended important modifications and enhancements to the SAARC study report before undertaking the implementation of Management and Monitoring Framework for Regulatory Compliance by the power transmission utilities in the Region.
Impact	Pursuant to the recommendations by the Colombo workshop, the study report was updated and published. The report has been uploaded on the SEC's website; published copies have been shared with the Member States for their consideration for implementation.

Table 2.3: Seminars and Workshops Held under PENT

2.3.4 Capacity Building Arranged under PENT

SAARC Workshop on Experience Sharing of Construction, Operation and Maintenance of LNG Facilities (2-day, India)	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	15
Outcome	It recommended SEC to arrange further workshops for Policy Makers from the Member States to ensure regional cooperation with special emphasis on LNG business; training programmes exclusively on LNG sourcing, negotiation and contracting; sharing best practices among Member States.
Impact	LNG diversifies fuel mix of SAARC Member States; better understanding about LNG facilities enabled Member States to prepare themselves for introduction of LNG to meet the energy needs of the people of SAARC Region.
SAARC Workshop on Harmonizing Regulations and Policies for Cross Border Power Trade, Risk Sharing and Financial Settlement Issues, Nepal	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	97
Outcome	It was recommended that SEC might identify potential Hydro power projects for development as regional energy projects. It was also suggested that The Electricity Laws and Regulations may be amended at country level or through a regional framework at SAARC level ratified further by all Member States.
Impact	Greater energy cooperation among Member States became possible due to standardized operations in various segments of the power sector.

Table 2.4: Capacity Building Held under PENT

2.3.5 Key Performance Indicators

An assessment of these activities vis-à-vis five key indicators has been undertaken, as provided in this section.

Relevance

The need of the hour for the eight Member States of the SAARC region in identifying and prioritizing the vast opportunities available in the Region in terms of electricity, natural gas and energy technology, and the activities under PENT have aimed at just that. SEC has focused its energies on carrying out pre-feasibility studies for potential regional coal and

hydro power plants. It has also conducted capacity building workshops and led stakeholders to discuss issues that span all sub-regions, for example the SAARC Seminar on the Role of Private Sector in Regional Power Trade quite aptly focused on issues pertinent to all Member States, such as grid security and technical, commercial and regulatory aspects of regional power trade in the SAARC Region.

In addition, the SEC has also conducted a number of workshops pertaining to sharing expertise and knowledge about energy technology across the SAARC Region. The SAARC Workshop on Experience Sharing of Construction, Operations and Maintenance of LNG Facilities was solely focused on the transfer of technology and prevailing best practices across Member States.

However, the representation of Afghanistan has been observed to be not as significant as other Member States when it comes to activities under PENT. The comprehensive studies on pricing mechanisms of oil, natural gas and electricity do not include analysis on mechanisms prevalent in Afghanistan, something the Member State could definitely have benefited from.

Quality and Effectiveness

This indicator deals with the extent to which the relevant programme activities have brought the desired results, and/or achieved their objectives. Since the activities in question have more to do with qualitative analysis and knowledge sharing, the effects of these activities are not measurable.

However, with regards to the quality of the activities carried out, it is appropriate to add that the SEC has made considerable efforts to ensure high quality in its studies and workshops. The studies on pricing mechanisms of oil, gas and electricity appear to be based on accurate data, and have detailed comprehensive analyses of the existing frameworks of Member States, the comparison of which will prove to be beneficial for the Member States given the similarities across the Region and the applicability of mechanisms from one Member State to the other. In addition, the workshops under PENT have been led by experts from the field having inter-regional experiences, who have led their trainings staying within the context of the Region and the relevance of their training is not country-specific but has been found to be useful for specialists across Member States.

As for the effectiveness of these activities, SEC is suggested to create a balance amongst various modes of undertaking these activities i.e. studies, trainings and workshops on the basis of a project cycle under a particular thematic area.

Coherence

All activities under PENT directly fall under the umbrella of the aims set out by SAARC and its technical arm, the SEC. PENT has worked towards strengthening South Asia's capacity to address regional energy issues, and facilitated energy trade within the Region with the work on pre-feasibility studies. It has addressed issues hindering private investment, and promoted more efficient use of energy through knowledge sharing of the new technology available. Therefore, it has directly been following the goals mandated under SAARC as well as the SEC's Strategic Plan.

Sustainability

Since the broader theme underlying PENT activities and the associated issues are still relevant to the SAARC region, and are likely to remain so in the foreseeable future pertaining to issues revolving around the inclusion of private sector in the energy sector, it

can reasonably be declared that the trainings conducted and the studies carried out will remain applicable to the Region and Member States will continue to benefit from the expert insights that have been provided to them through these programme activities. However, in order to enhance the value of these activities and make them sustainable, emphasis is once again placed on devising project cycle for undertaking programmes under the ensuing strategic plan based on a comprehensive strategy to achieve certain tangible results. By building upon such success stories, SEC can scale up the level of its activities towards achievement of its ultimate goal of energy trade between SAARC Member States.

Participation

A careful analysis of the workshops organized under PENT has revealed that the SEC has adopted an all-inclusive approach when it comes to acquiring trainers for its workshops. The seminars and workshops have been conducted by experts from various fields across all the Member States, and the subject matter of the workshops has not been limited to a few Member States only.

2.3.6 Feedback from Stakeholders and its Analysis

The specific feedback from the stakeholders can be viewed in Section 7.2 of the Study. However, the comments by the stakeholders on PENT activities implied that the SEC team has been successful in the activities that have been carried out under this thematic area, and these have also had the desired impact on the people of the SAARC region. The activities were well planned, executed efficiently and left little to be desired in terms of quality.

3. Programme on “Integrated Assessments of Energy, Transport and Environment” (PETREN)

3.1 Background/Purpose

The Programme on Integrated Assessments of Energy, Transport and Environment (PETREN) was envisioned in light of the gaps in integration between the sectors of energy, transport and environment, and the realization of its importance in the context of improving economic efficiency and economic development in the Region. The energy demands of Member States are persistently increasing, transport costs are building up across all major cities in the Region, and the world is generally moving towards more environmentally friendly activities. Figure 3.1 draws connections amongst these three sectors.

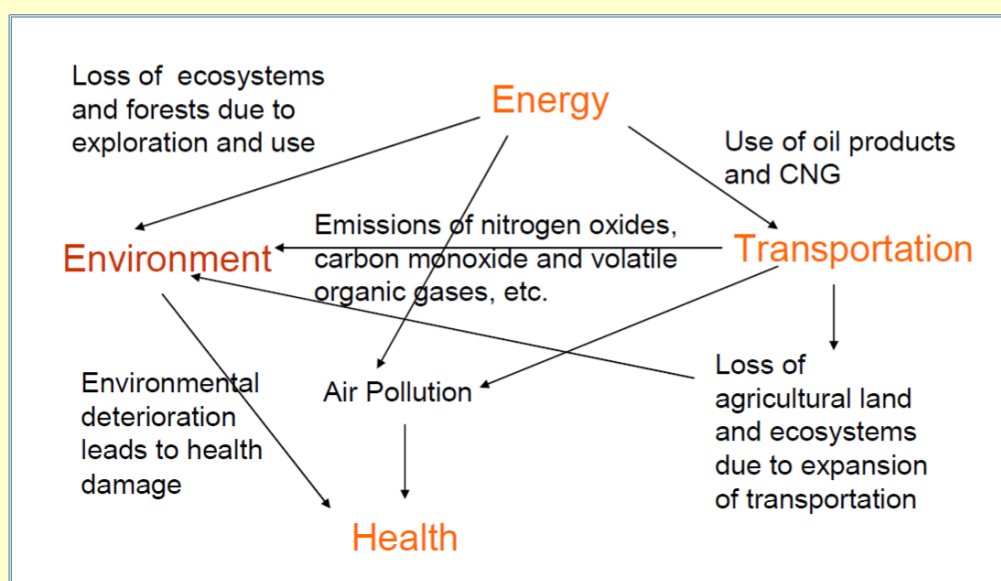


Figure 3.1: Connections amongst Energy and Other Sectors

Despite the clear links between energy and other sectors i.e. environment, transportation and health, there has been a dearth of activities focused towards strengthening these links for increased benefits. PETREN was thus envisioned to provide useful integrated analyses at region-wide levels and identify policy options that may be of mutual benefit to several SAARC Member States.

3.2 Nature and History of Past Activities

The SEC has carried out a few activities under PETREN that have focused on the integration of the energy sector with other sectors; these activities are reflected through Table 3.1.

#	Reference	Programme Activity
1.	PRG-30/2011/PETREN	SEC-UNESCAP Joint Workshop on Strengthening Institutional Capacity to Support Energy Efficiency in South Asia
2.	PRG-34/2012/ PETREN	Study on Evaluating Energy Conservation Potential of Brick Production in Bangladesh, India, Nepal and Pakistan by Sharing Best Practices in SAARC Member States
3.	PRG-39/2012/PETREN	SAARC Workshop on Women and Energy

Table 3.1: Programme Activities under PETREN

3.3 Assessment of PETREN Activities

An assessment of the activities carried out under the domain of PETREN based on analysis of the outcome and impact is provided in this section.

3.3.1 Summary of Outputs under the PETREN Programme

Chart 3.1 summarizes the activities conducted under the PETREN Programme.

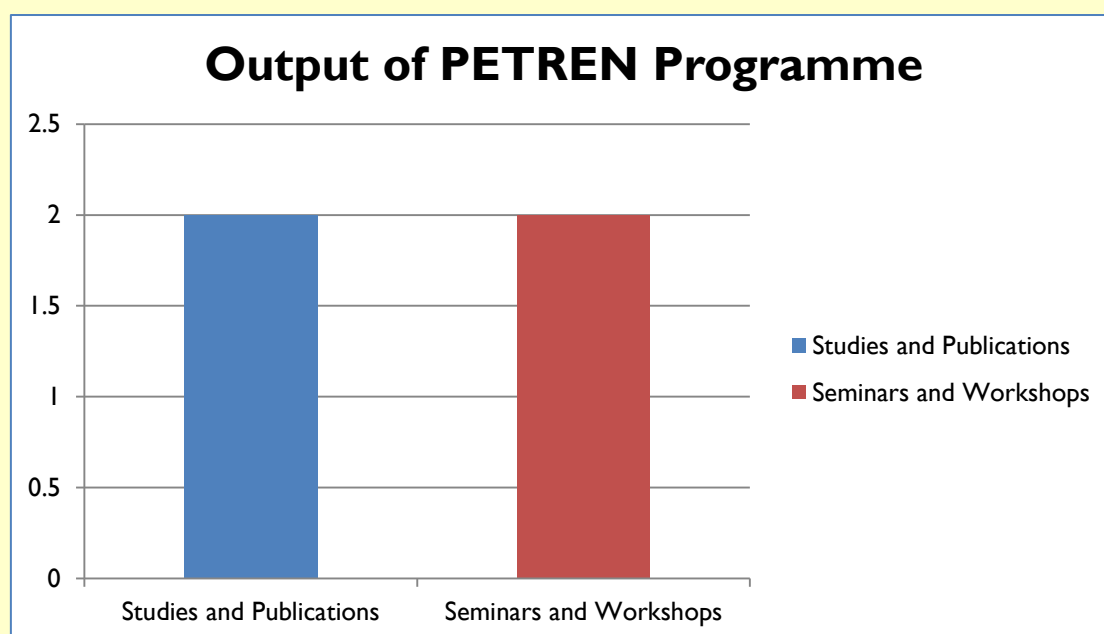


Chart 3.1: Output of PETREN Programme

3.3.2 Research Activities under PETREN

Research activity undertaken within the ambit of PETERN is highlighted in Table 3.2.

Study on Evaluating Energy Conservation Potential in Brick Production in Bangladesh, India, Nepal and Pakistan by Sharing Best Practices in SAARC Countries	
Proposed in FY	2012
Completed in FY	2012
Outcome	<ul style="list-style-type: none"> • Study on Energy Conservation Potential of Brick Production in Bangladesh, India, Nepal and Pakistan • A dissemination workshop was organized to share the country wise findings of the study with the objective to discuss priority areas, lessons learnt, best practices with respect to achieving energy efficiency in the Brick Sector. The workshop helped in cooperation based on transferring technologies, sharing expertise and knowledge between the public and private institutions.
Impact	It contributed in improvements in the brick production capacity and brought energy efficiency into the processes for addressing the regional and global environmental concerns.

Table 3.2: Research Activities carried Out under PETREN

3.3.3 Seminars and Workshops Held under PETREN

Seminars and workshops organized under PETERN are provided in Table 3.3.

SEC UNESCAP Joint Workshop on Strengthening Institutional Capacity to Support Energy Efficiency in South Asia, Bhutan	
Proposed in FY	2011
Completed in FY	2011
Number of Participants	130
Outcome	<ul style="list-style-type: none"> • Project titled “Strengthening Institutional Capacity to Support Energy Efficiency in Selected Asian Countries” with UNESCAP. • A gap analysis study on energy efficiency of a country • One national workshop conducted in Pakistan (100 participants) • One sub-regional workshop conducted in Bhutan (30 participants)

Impact	Energy Efficiency has largely been a neglected area in the Region; the dire need to inculcate energy efficiency in policy and law was somehow addressed through this joint effort by SEC and UNESCAP.
SAARC Workshop on Women and Energy, Maldives	
Proposed in FY	2012
Completed in FY	2012
Number of Participants	35
Outcome	<ul style="list-style-type: none"> Increased awareness about understanding and recognition of women's role in energy sector for sustainable development. Identified topics for undertaking baselines, research papers and data analysis for promoting role of women in energy sector. SEC facilitated a forum for networking among different actors at regional level.
Impact	Significance and effectiveness of women's role in enhancing efficient use of energy resources was highlighted leading to changes in practices and policies for seeking positive role of women in the Region.

Table 3.3: Seminars and Workshops Held under PETREN

3.3.4 Key Performance Indicators

Comprehensive assessment of the activities undertaken under the domain of thematic area PETREN has been carried out and categorized according to the five customized KPIs, as available in this section.

Relevance

This indicator seeks to analyse the extent to which activities have been focused towards target groups and the needs and priorities of the Member States. In this context, activities carried out under PETREN can be considered to be successful in terms of focusing on right areas; though few in number. The SAARC Workshop on Women and Energy created a significant linkage between the energy sector and women. The workshop helped create awareness regarding the role of women in increasing energy efficiency and working towards its sustainable development. It also provided a platform for networking among different actors of various sectors at a regional level.

Quality and Effectiveness

SEC has managed to maintain its high quality standards when carrying out activities under PETREN. The programme activity workshop on "Strengthening Institutional Capacity to Support Energy Efficiency in the Selected SAARC Member States" was quite rare owing to its subject. The activity included national and sub-regional workshops in addition to an in-depth gap analysis on institutional capacity with respect to energy efficiency to assess the

barriers and challenges faced. This gap study not only provides insight into the challenges faced by Pakistan but is also relevant to other Member States that can apply the methodology and results of this Study to their own national contexts. The activity also contained a roadmap including long-term and short-term strategies that can prove to be beneficial for Pakistan as well as other Member States, to the extent practicable. Activities under this thematic area are aligned with the overall energy sector imperatives of SAARC Member States. However, effectiveness of SEC's interventions shall be ensured through linkages with other programmes under other thematic areas and their role as change agents in the respective sub-sectors of energy in SAARC Member States needs to be re-enforced. Unless due care and attention is adverted to the proposed management practice in designing programmes under this thematic area, the activities conducted hereunder would merely remain a standalone set of events.

Coherence

Activities under PETREN have been successful in furthering SEC's goal of integrating the energy sector with other sectors. For instance, it has worked towards the integration between the energy sector and the brick sector, as well as created awareness regarding the role of women in improving energy efficiency. In this context, PETREN has been able to enhance SAARC expertise in energy integration and energy development, therefore, proving to be coherent with the broader goals set by SAARC.

Sustainability

The insights shared with participants through PETREN workshops seek to benefit participants from a number of sectors. These insights, though explained through the context of a few Member States, remain applicable across the Region. For example, the joint SEC-UNESCAP workshop, conducted in Pakistan at a national level and in Bhutan at a sub-regional level, the insights provided therein will remain beneficial for all the stakeholders present at the workshops. However, to leverage on the results acquired from programmes under this thematic area, it would have been pertinent to co-relate and integrate with programmes being conducted under other thematic areas. Alternatively, as suggested earlier, a project cycle based programme should be conducted under this thematic area such that gaps identified in conservation policies, tools and methods adopted in various SAARC Member States could contribute to ultimate goal of introducing conservation in certain energy intensity sectors or sub-sectors.

Participation

The activities that were carried out under this programme have included the involvement of a number of Member States, especially the study and resulting dissemination workshop on the Energy Conservation Potential in Brick Production. This activity encompassed matters relating to Bangladesh, India, Nepal and Pakistan, for the purpose of the study as well as the dissemination workshop.

3.3.5 Feedback from Stakeholders and its Analysis

Though the number of activities carried out under this thematic area have been limited, the quality of work under PETREN activities was considered reasonable by the stakeholders. There was a workshop conducted entirely on the role of women in the energy sector. It managed to increase awareness about understanding and recognition of women's role in energy sector for sustainable development and hence reached a successful conclusion. Specific comments given by stakeholders can be found in Section 7.2 of the Study.

4. Programme to “Minimize Oil Imports (PROMO) through Improvements in Energy Efficiency and Fuel Substitution”

4.1 Background/Purpose

The Programme to “Minimize Oil Imports (PROMO) through Improvements in Energy Efficiency and Fuel Substitution” was envisioned in light of the increasing dependency of SAARC Member States on oil imports. The total cost of importing crude oil and oil products across the SAARC countries has historically amounted to billions of dollars each year, and this dependency is likely to further increase over the years at least in terms of quantum if not financial.

The relevance of thematic area PROMO in this context is to increase awareness across Member States regarding the results that energy efficiency can bring in the Region, including but not limited to savings of millions of dollars. The aim of PROMO is to bring to light the several ways and means through which substantial reductions in oil imports can be realized, thereby increasing energy efficiency of the Region.

4.2 Nature and History of Past Activities

PROMO has been one of the most active thematic area of the SEC, with activities including studies, position papers, training workshops, dissemination workshops and field trials. A complete list is provided through Table 4.1:

#	Reference	Programme Activity
1.	PRG - 7 / 2009 / PROMO	Implementation of SAARC Road Map for Energy Efficiency and Energy Conversation
2.	PRG - 8 / 2009 / PROMO	Preparation of Position Paper on Gas Hydrates Resource Potential of South Asia
3.	PRG - 9 / 2009 / PROMO	Training Workshop on Energy Audit
4.	PRG - 10 / 2009 / PROMO	Workshop on Harmonization of Appliances Standards and Labelling Programme
5.	PRG - 26 / 2011 / PROMO	Training Workshop on Energy Audit
6.	PRG - 44 / 2012 / PROMO	SAARC Workshop on Renewable Energy Policy, Regulation and Grid Connectivity
7.	PRG - 45 / 2013 / PROMO	Field Trials of SAARC Chullahs (ICS)
8.	PRG - 52 / 2013 / PROMO	SAARC Workshop on Household Energy Efficiency and Conservation with Women Participation
9.	PRG - 55 / 2013 / PROMO	SAARC Dissemination Workshop on Energy Conservation Potential of Brick Production in Selected SAARC
10.	PRG - 56 / 2013 / PROMO	SAARC Training Workshop for Energy Audit and Efficiency in the Power Sector
11.	PRG-58/2014/PROMO	Study for Assessment of Energy Efficiency Potential

#	Reference	Programme Activity
		through Energy Audit on Power Transmission and Distribution Grid Stations (Pakistan)
12.	PRG-67/2014/PROMO	Webinar on Concept, Establishment and Operation of a Power Exchange for Regional Power Trading
13.	PRG – 69 / 2015 / PROMO	Comparative Study for the Prevailing Tariff of Renewable Energy in Member States and, Assessing and Recommending Options such as Net-metering, Banking and Wheeling
14.	PRG - 71 / 2015 / PROMO	Impact Assessment of SEC's Initiatives and the Way Forward
15.	PRG – 74 / 2015 / PROMO	Study to Assess Renewable Energy Development in South Asia; Achievements and the Way Forward in the Perspective of Policies and Investment Opportunities
16.	PRG – 76 / 2015 / PROMO	Study on Optimum Power Generation Mix for a Sustainable Power Sector in South Asia
17.	PRG – 77 / 2015 / PROMO	Study on Energy Efficiency in Transport Sector in SAARC Member States
18.	PRG – 83 / 2015 / PROMO	SAARC Workshop on Energy Based Livelihoods Contributing to Economic Empowerment of the Marginalized Sectors and Women in the SAARC Region
19.	PRG – 89 / 2015 / PROMO	Promotion of SAARC Chullahs (Improved Cooking Stoves-ICS) for their Commercialization / Marketing / Scaling up in the SAARC Member States

Table 4.1: Programme Activities under PROMO

4.3 Assessment of PROMO Activities

An assessment of interventions undertaken by SEC under thematic area PROMO based on analysis of outcome and impact is provided in this section.

4.3.1 Summary of Outputs under the PROMO Programme

Chart 4.1 summarizes the activities conducted under the PROMO Programme:

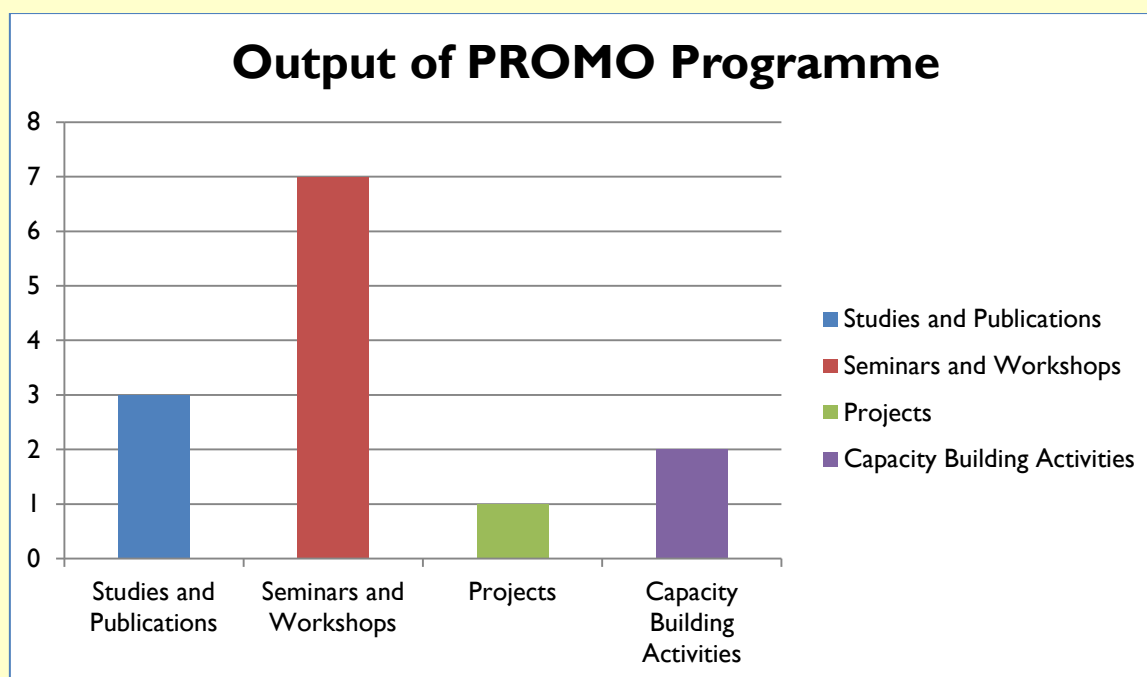


Chart 4.1: Output of PROMO Programme

4.3.2 Seminars and Workshops Held under PROMO

SEC organized the seminars and workshops under the thematic area PROMO as listed in Table 4.2:

Workshop on Implementation of SAARC Road Map for Energy Efficiency and Energy Conservation	
Proposed in FY	2009
Completed in FY	2009
Number of Participants	35
Outcome	<ul style="list-style-type: none"> Promoted the concept of energy conservation and efficiency improvement and created awareness among the professionals of the Member States. Discussed and reviewed diversified fields of energy audit to build up capacity and to enhance awareness among the professionals.
Impact	Effective introduction of energy conservation and efficiency improvement programme in Member States on a wider scale.
Workshop on Harmonization of Appliances, Standards and Labelling Programme, Sri Lanka	
Proposed in FY	2009
Completed in FY	2009

Number of Participants	30
Outcome	Enhanced the knowledge base of the policy makers and professionals, and facilitated the sharing of experiences and best practices in the field of energy efficiency standards and labelling for appliances in South Asia Region.
Impact	The developed energy standards, that define the energy performance of manufactured products, helped in eliminating products from market whose energy consumption is not within the defined standards.
Training Workshop on Energy Audit, New Delhi, India	
Proposed in FY	2011
Completed in FY	2011
Number of Participants	38
Outcome	Created awareness among the professionals of the Member States on Energy Audit
Impact	Helped to accept and promote the concept of energy conservation and efficiency improvement in South Asia.
SAARC Workshop on Renewable Energy Policy, Regulation and Grid Connectivity, Bhutan	
Proposed in FY	2012
Completed in FY	2012
Number of Participants	22
Outcome	Discussed the required regulations through which renewable energy sources can be integrated in the electric power grids of Member States.
Impact	Helped in building consensus on the critical strategies required for SAARC Member States to implement and multiplex grid-connected renewable energy technology options in relevant Member States.
SAARC Workshop on Household Energy Efficiency and Conservation with Women Participation, Bangladesh	
Proposed in FY	2013
Completed in FY	2013
Number of Participants	41
Outcome	<ul style="list-style-type: none"> Shared knowledge and good practices on energy

	<p>conservation and energy efficiency in homes</p> <ul style="list-style-type: none"> • Promoted energy conservation measures in domestic sector through active participation of women • Created awareness on energy efficiency practices • National level advocacy and capacity-building on these issues through women's organizations and regional "South-South" cooperation between South Asian countries.
Impact	Emphasized and encouraged women of the SAARC Member States to adopt household energy efficiency and energy conservation practices for a greater impact
SAARC Dissemination Workshop on Energy Conservation Potential of Brick Production in Selected SAARC Member States, Nepal	
Proposed in FY	2013
Completed in FY	2013
Number of Participants	31
Outcomes of the Activity	Shared the country wise findings of the SEC study with the objective to discuss priority areas, lessons learnt, best practices with respect to achieving energy efficiency in the brick sector.
Impact	The workshop helped in cooperation based on transferring technologies, sharing expertise and knowledge between the public and private institutions in order to improve the brick production capacity and induce energy efficiency into the process for addressing regional and global environmental concerns.
SAARC Training Workshop for Energy Audit and Efficiency in the Power Sector, Pakistan	
Proposed in FY	2013
Completed in FY	2013
Number of Participants	40
Outcome	<p>Recommendations for the way forward in the perspectives of energy auditing and efficiency in the power sector of the SAARC Member State included the following:</p> <ul style="list-style-type: none"> • Preparation of a project for SAARC Development Fund (SDF) for providing Energy Management and Services in the SAARC Member States • SEC should develop different mechanisms for sharing best practices on energy auditing and energy efficiency • A SAARC Energy Audit Toolkit should be developed by SEC • SAARC Member States should develop a cadre of Energy

	<p>Management System Experts (ISO-50001) with the support of organizations such as Sri Lanka Energy Managers Association (SLEMA).</p> <ul style="list-style-type: none"> • Energy Audit and Efficiency improvement plan should be a part of the business plan of all utility companies, • SEC should consider undertaking a pilot/demonstration project “Energy Conservation by Using Low Cost, High Efficiency Lighting Technologies in one or more SAARC Member States” through its programme activities.
Impact	Established the importance of energy audit, created awareness regarding the same as well as the procedures entailing energy auditing
Promotion of SAARC Chullahs (Improved Cooking Stoves-ICS) for their Commercialization / Marketing / Scaling up in the SAARC Member States, Pakistan	
Proposed in FY	2015
Completed in FY	2015
Number of Participants	72
Outcome	Awareness and experience sharing about ICS and women participation.
Impact	The participants from Member States will in-turn interact with the relevant organizations working on Cooking Stoves technology in their respective Member States and get these ICS(s) manufactured through small entrepreneurs following their business models, which will popularize these ICS(s).
SAARC Workshop on Energy Based Livelihoods Contributing to Economic Empowerment of the Marginalized Sectors and Women in the SAARC Region, Maldives	
Proposed in FY	2015
Completed in FY	2015
Number of Participants	26
SEC's Input	<ul style="list-style-type: none"> • Knowledge Partner: Ministry of Environment and Energy, Government of Maldives. • Delegates from seven Member States including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka joined this workshop. • Experts and resource persons from four SAARC Member States i.e. Bangladesh, India, Nepal and Pakistan shared knowledge in this perspective workshop. • The delegates and resource persons participated in the workshop discussing the opportunities and challenges faced

	<p>by the marginalized groups and women in the region in regard to access to modern energy for livelihood, identifying the gaps that exist in the laws and showcasing different energy projects targeted to rural women and marginalized groups.</p> <ul style="list-style-type: none"> Following major aspects were during the workshop: <ul style="list-style-type: none"> a. Energy, Gender and Poverty Nexus; b. Access to Energy Sources: Gender Perspective; c. Energy based livelihoods and Economic Empowerment; and d. Integration of Gender Perspectives in Energy Policy
Outcome	<p>The intervention helped in highlighting that women are required to be included in energy policy decisions to develop programme with an aim to increase access to modern energy, use of renewable energy and use energy in a more prudent way (Energy Efficiency). The workshop recommendations included that SEC should play a pivotal role in knowledge sharing among the Member States in this regard.</p>
Impact	<p>Helped the cause of women empowerment in the field of renewable energy and energy efficiency.</p>

Table 4.2: Seminars and Workshops Held under PROMO

4.3.3 Projects Executed under PROMO

Field Trials of SAARC Chullahs, Pakistan	
Proposed in FY	2013
Completed in FY	2013
Outcomes	<p>Improved Cooking Stoves (ICS) deployed for field trials in FY 2013 in different geographical locations of Pakistan simulating different climatic regions of SAARC Member States to verify the envisioned assumption with regard to energy efficiency and acceptability by the end users.</p>
Impact	<p>These ICS are highly likely to be adopted in the SAARC Member States as they are energy efficient and low in cost. This will be undertaken by SEC with the help of relevant organizations in the Member States who will engage small entrepreneurs for its success.</p>

Table 4.3: Projects Executed under PROMO

4.3.4 Capacity Building Events Held under PROMO

Webinar on Concept, Establishment and Operation of a Power Exchange for Regional Power Trading	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	375
SEC's Input	<ul style="list-style-type: none"> • First ever SAARC webinar was organized by SEC in collaboration with Indian Energy Exchange (IEX) India. • Hectic efforts were made for wider participation across the Region. Apart from individual delegates, Member States Afghanistan, Bhutan and Pakistan organized collective gatherings at Kabul, Thimphu, Islamabad and Lahore. • Main presentation was delivered by Mr. Rajes Mediretta, Executive Director, IEX, Delhi. • Some of the delegates joined the webinar through smart phones. • In view of the national holiday in Bhutan (298 participants, 11th November 2014), the webinar was repeated (77 participants, 18 November 2014).
Outcome	<ul style="list-style-type: none"> • An introduction to real time operations of power trading exchange in India and issues related thereto. • Also helped SEC professionals in learning and applying the latest IT/internet tools for capacity building of SAARC professionals.
Impact	The activity contributed significantly towards the SEC's overall objective i.e. SAARC Energy Ring/SAARC Market for Electricity (SAME) by focusing on establishing and operating regional power trading market and power exchange.

Table 4.4: Capacity Building Held under PROMO

4.3.5 Key Performance Indicators

Assessment of the programme activities undertaken within the domain of PROMO has been carried out and categorized in this section according to the five pre-defined key indicators:

Relevance

The activities carried out under PROMO cater to two major themes; reducing dependency on oil imports and enhancing energy efficiency. These themes are extremely relevant to all the Member States, as both of these are critical to the energy sector. Most importantly, addressing issues pertaining to these themes will amount to savings in millions of dollars.

In addition to catering to the rising needs of Member States, PROMO has also focused on targeting groups such as women and the independent media through its workshops to increase awareness regarding the role of these groups in increasing energy efficiency.

Quality and Effectiveness

Workshops carried under PROMO can be tagged as the most productive ones, in terms of their design, the significance of their subject matter and its retention, such as the training workshop on energy audit which not only provided participants with the theory behind energy audit but also equipped them with the right tools to carry out energy audits.

Further, the SEC's intervention pertaining to ICS can perhaps be classified as its most successful one. The ICS were designed, developed and manufactured by the SEC, following which, field trials were undertaken in several districts of Pakistan under different climatic conditions; the aim was to simulate the different climatic regions of SAARC Member States. An assessment of the feedback obtained from users of the ICS shows that across districts, on average, most users felt that the cooking stoves were easy to use, saved 15-30 minutes of their cooking time and led to an average saving in fuel of about Rs. 700-800 per month. Such feedback shows that this activity was quite popular amongst the users who tested these cooking stoves.

Coherence

All activities carried out under this programme have been directly in line with the SEC aims and objectives, and the broader goals set out by SAARC. Its activities have promoted the use of energy efficient appliances and the role of different stakeholders in improving energy efficiency in the Region, thereby contributing towards sustainable development in South Asia. The nature of activities carried out under this thematic area appear to overlap with that of the thematic area of PETREN, hence SEC may consider the possibility of reducing its thematic areas and conceiving its programmes under a restricted scheme to enhance the possibility of arranging a series of programmes in a particular dimension. In this respect, SEC may target achieving certain low hanging milestones such as efforts for implementation of labelling regimes, introduction of certain regional standards and gradual enforcement of the same, strengthening regional institutions for the purpose through trainings, advisory roles and engagement with stakeholders particularly media. Similarly SEC may also embark upon a country specific technical assistance programme.

Sustainability

A careful analysis of the activities under PROMO suggests that sustainability was a common factor with respect to the design of these activities. The workshops aimed at creating awareness regarding energy efficiency, the Improved Cooking Stoves, and the energy audit workshops all point towards energy sustainability in the long-run. The energy audit trainings have especially been designed to ensure that participants learn the methodology that they can use to carry out energy audits in their respective jurisdictions. SEC may further make these efforts sustainable by introducing certain energy audits manuals and guides which could facilitate quick implementation of energy auditing in SAARC Member States. Moreover, SEC may also strive for seeking cooperation of SAARC Member States towards gradual introduction and enforcement of compulsory energy audits in certain sectors and SEC may act as the technical advisor of SAARC Member States, monitoring and coordinating their efforts, programmes and providing necessary guidance, training and facilitation, where needed. SEC may also consider introduction of certain regional energy indices as a monitoring practice in this respect. An annual SAARC energy summit could also be another vehicle enabling SEC to show case and feature key achievements and resolves in a particular area of energy efficiency, energy conservation, and sustainable energy, etc. in the Region.

Participation

PROMO activities have been all-inclusive, ensuring participation of stakeholders in various steps of the activities from design through implementation. These activities were proposed in

the annual Governing Board meetings, which is a stakeholders' body with representation from all the Member States. Subsequently, experts from several Member States were involved in conducting the workshops under PROMO.

4.4 Feedback from Stakeholders and its Analysis

Detailed feedback from the stakeholders has been collected, collated and analysed in Section 7.2 of the Study. However, the general feel of the stakeholders regarding activities carried out under PROMO was that of satisfaction with the choice and quality of executed activities. It has been found that stakeholders rate workshops to be the most effective and preferred category of activities to be carried out. Since this thematic area consists mainly of workshops and seminars, therefore it meets expectations set out by the stakeholders.

5. Programme to “Successfully Implement Technology Transfer” (POSIT)

5.1 Background/Purpose

The Programme to “Successfully Implement Technology Transfer” (POSIT) was an initiative by SEC to bring technological advancement in the Region. Several energy technologies are being transferred to the SAARC Region such as wind turbine designed in the United States and Denmark that have been manufactured in other parts of the world. In addition to hard technologies, soft technologies such as management techniques are equally relevant in this context. However, there exists a significant need to modify the technology to suit the local contexts. It is important to identify the technical and social factors that entail successful transfer of technologies, and this is what SEC aims to seek through activities carried out under POSIT.

5.2 Nature and History of Past Activities

SEC has managed quite a few Programme activities under POSIT. Table 5.1 provides a list of such interventions:

#	Reference	Programme Activity
1.	PRG - 1 (A) / 2008 / POSIT	Dissemination Seminar on findings of Study on Critical factors in determining Success of Renewable Energy Projects in South Asia
2.	PRG - 4 (A) / 2008 / POSIT	Publication of Proceedings of SAARC Training Workshop on Biofuels
3.	PRG - 5 / 2008 / POSIT	Study visit of 2-member Delegation of SEC to Energy Institutions of Afghanistan, Bhutan and India
4.	PRG - 11 / 2009 / POSIT	Workshop on Rural Electrification in Cooperation with Grameen Shakti for Wider Replication in Other Member States
5.	PRG - 16 / 2010 / POSIT	A Study on Geothermal Resources of SAARC Countries
6.	PRG - 17 / 2010 / POSIT	A Case Study on Indian Wind Power Programme for Technology Transfer and Sharing Best Practices
7.	PRG - 20 / 2010 / POSIT	SAARC Training Workshop on Seismic Survey-data Acquisition, Processing and Interpretation in cooperation with OGDCL
8.	PRG - 23 / 2010 / POSIT	SAARC Seminar on Solar Energy
9.	PRG - 31 / 2011 / POSIT	Development, Designing and Fabrication of Improved Cooking Stoves (ICS) Workable Model(s) for Cooking with Biomass for Rural Population in SAARC Region
10.	PRG - 35 / 2012 / POSIT	Attendance of Conferences, Seminars and Visits to R&D Institutions in Asia
11.	PRG - 40 / 2012 / POSIT	SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power

#	Reference	Programme Activity
12.	PRG - 41 / 2012 / POSIT	SAARC Workshop on Tight Gas and Shale Gas Exploration in South Asia
13.	PRG - 48 / 2013 / POSIT	Study on Cogeneration Opportunities in Sugar and Paper Industries in SAARC Member States
14.	PRG - 51 / 2013 / POSIT	Participation of SEC Professionals in Conferences, Seminars and Study Visits to Energy related Institutions in Asia
15.	PRG - 63 / 2014 / POSIT	SAARC Dissemination Workshop on SEC Study on Co-generation Opportunities in Sugar and Paper Industries in SAARC Member States
16.	PRG - 64 / 2014 / POSIT	SAARC Training Workshop Power System Studies for Synchronization of Multiple Systems
17.	PRG - 78 / 2015 / POSIT	SAARC Training Workshop on Experience Sharing on Coal Bed Methane, Underground Coal Gasification
18.	PRG - 82 / 2015 / POSIT	SAARC Perspective Workshop on the Past, Present and Future of High Voltage DC (HVDC) Power Transmission
19.	PRG - 86 / 2015 / POSIT	Study Visit of SEC Professionals to India
20.	PRG - 88 / 2015 / POSIT	SAARC Technical Training Course for Power System Planners and Analysts Through Distance Learning

Table 5.1: Programme Activities under POSIT

5.3 Assessment of POSIT Activities

In this section, initiatives undertaken within the ambit of thematic area POSIT are assessed based on the analysis of relevant output and impact.

5.3.1 Summary of Outputs under the POSIT Programme

Chart 5.1 summarizes the activities conducted under the thematic area POSIT:

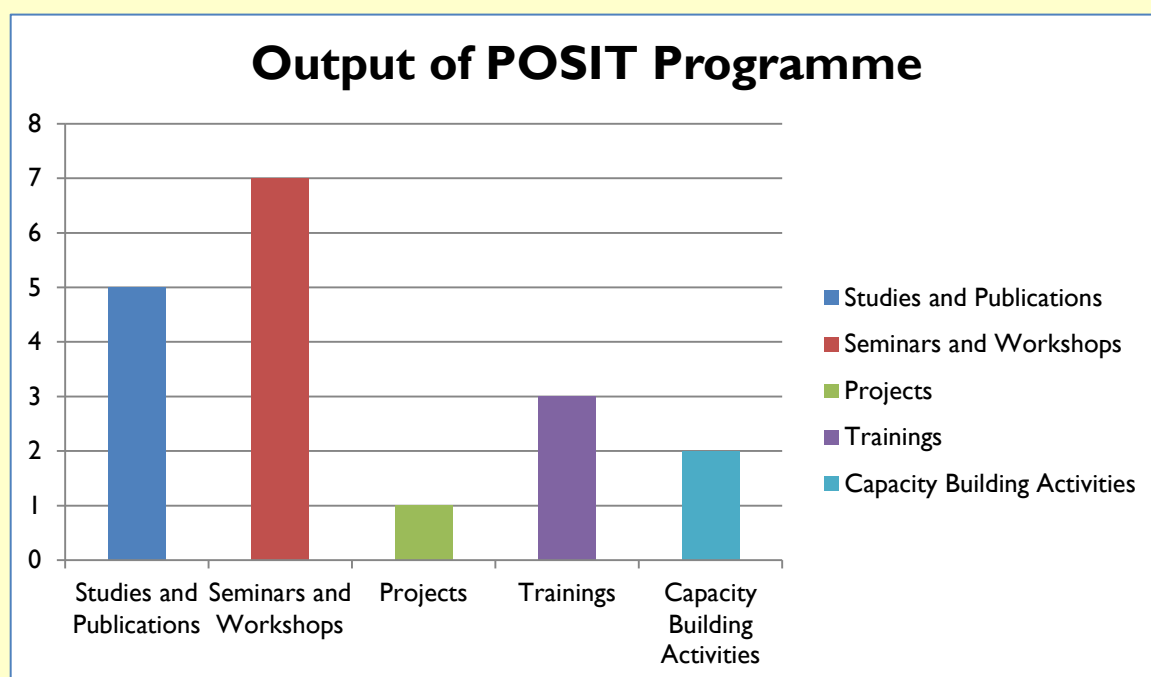


Chart 5.1: Output of POSIT Programme

5.3.2 Research Activities carried out under POSIT

Study on Geothermal Resources of SAARC Countries	
Proposed in FY	2010
Completed in FY	2011
Outcome	Explored and evaluated an alternate and non-conventional energy resources for meeting increasing energy demands in South Asia Assessed the geothermal resource potential of the Region.
Impact	Facilitated promotion of regional research and development activities on geothermal energy.
A Case Study on Indian Wind Power Programme for Technology Transfer and Sharing Best Practices	
Proposed in FY	2010
Completed in FY	2011
Outcomes of the Activity	Highlighted the development of wind energy resources in South Asia as an alternate of conventional energy resources for meeting increasing energy demands to the region.
Impact	Emphasized sharing the best practice of Indian Wind Power

	Programme for the benefit of other SAARC Member States.
Attendance of Conferences, Seminars and Visits to R&D Institutions in South Asia	
Proposed in FY	2012
Completed in FY	2012
Outcome	Uplifting SEC knowledge base and strength of capacity with respect to action planning.
Impact	Enhanced the knowledge of the SEC Professionals in the relevant areas as well as exposing them to the modern technological developments.
Study on Cogeneration Opportunities in Sugar and Paper Industries in SAARC Member States	
Proposed in FY	2013
Completed in FY	2013
Outcomes of the Activity	Country-wise findings and discussion of technical aspects, current cogeneration situation, potential, government initiatives and legal framework, economic drivers, environmental benefits and barriers in implementing of cogeneration in Bangladesh, India, Pakistan and Sri Lanka.
Impact	Emphasized sharing the best practices and knowledge of technical aspects of cogeneration across the Region.

Table 5.2: Research Activities carried out under POSIT

5.3.3 Seminars and Workshops Held under POSIT

Table 5.3 provides a list of seminars and workshops organized under POSIT.

Dissemination Seminar on Study 'Critical Factors in Determining Success of Renewable Energy Projects in South Asia', Hyderabad, India	
Proposed in FY	2008
Completed in FY	2009
Number of Participants	30
Outcome	<p>Helped in disseminating conclusions and recommendations of the study to all participated experts/ professionals from SAARC Member States.</p> <p>Facilitated all Member States in developing comprehensive RE policies and in designing renewable energy technology projects with factors lead success based on the regional practices.</p>
Impact	<p>Provided an opportunity for the participants to learn from successes and failure of renewable energy projects installed in the Region.</p>
Publication of Proceedings of SAARC Training Workshop on Biofuels, Sri Lanka	
Proposed in FY	2008
Completed in FY	2009
Number of Participants	30
Outcome	<p>The proceedings of the Workshop on Biofuels were published in cooperation with the Sri Lanka Sustainable Energy Authority.</p>
Impact	<p>Invaluable information disseminated on various aspects of biofuels will strengthen the policy makers, professionals, entrepreneurs and other stakeholders.</p>

SAARC Energy Centre – Grameen Shakti Joint Workshop on Rural Electrification through Renewable Energy, Dhaka, Bangladesh	
Proposed in FY	2009
Completed in FY	2010
Number of Participants	34
Outcome	Helped in the technology transfer and sharing of the best practices of the Member States.
Impact	Paved way for expansion of renewable energy projects to the rural areas of the Region with micro financing. Grameen Shakti sustainable model for rural electrification through renewable energy was successfully introduced.
SAARC Training Workshop on Seismic Survey-data Acquisition, Processing and Interpretation in cooperation with OGDCL, Pakistan	
Proposed in FY	2010
Completed in FY	2010
Number of Participants	15
Outcome	<ul style="list-style-type: none"> Facilitated transfer of 2D/3D Seismic Survey technology among the Member States and sharing of the relevant management practices; and Provided training and increased the skill of the professionals in seismic data acquisition, processing, and interpretation which helped stakeholders in identifying and delineating potential structures accurately
Impact	<ul style="list-style-type: none"> Enhanced expertise in exploration of resource evaluation and production planning; and Enabled the national exploration entities in applying state of the art seismic survey technology with more confidence

SAARC Seminar on Solar Energy, Maldives	
Proposed in FY	2010
Completed in FY	2011
Number of Participants	22
Outcome	<ul style="list-style-type: none"> Emphasized on the practical solutions of off-grid solar power (PV panels) particularly with reference to Maldives and Sri Lanka; and Sharing of best practices by professionals from all Member States.
Impact	Knowledge shared among Member States helped removing barriers in the promotion of solar power.
SAARC Workshop on Experience Sharing of Biogas, Solar Home Systems and Micro- Hydro Power Projects, Nepal	
Proposed in FY	2012
Completed in FY	2012
Number of Participants	40
Outcome	Shared experience on technical, economic, awareness building, financing, management practices and innovative aspects of Nepalese Biogas Programme, Solar Home System and Micro-Hydro for benefits of all the Member States.
Impact	Facilitated the sharing of the best practices and technology transfer among the SAARC Member States.
SAARC Workshop on Tight and Shale Gas Exploration in South Asia, Islamabad, Pakistan	
Proposed in FY	2012
Completed in FY	2012
Number of Participants	12
Outcome	<ul style="list-style-type: none"> Capacity building of Professionals of the Member States with respect to knowhow on exploration of petroleum products and production techniques especially Tight and Shale Gas; and Enhanced technical capability of Oil and Gas organizations engaged in exploration activities within the Region.
Impact	The event helped in increasing the production of Tight and Shale gas in the Region.

SAARC Perspective Workshop on the Past, Present and Future of High Voltage DC (HVDC) Power Transmission, Lahore, Pakistan	
Proposed in FY	2015
Completed in FY	2015
Number of Participants	72
SEC's Input	<ul style="list-style-type: none"> • Knowledge Partner: Pakistan National Transmission and Dispatch Company (NTDC); • Delegates from seven Member States including Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka joined this workshop; • Regional as well as international experts and resource persons (Canada, China, India, Netherland, Pakistan, Sri Lanka, United Kingdom, USAID and World Bank) shared knowledge in this perspective workshop; • Case of HVDC v/s HVAC was debated in a highly professional manner providing an invaluable capacity building opportunity for the SAARC professionals. Following aspects were included in the workshop agenda: <ul style="list-style-type: none"> ○ Technology Consideration for Cross Border Power Interconnections (UK) ○ USAID SARI/EI: Key Activities Undertaken and the Way Forward (USAID) ○ An Introduction to the Project CASA-1000 (Pakistan) ○ Flexible HVDC in China (China) ○ Inside the Technology: HVDC v/s HVAC (Canada) ○ Pakistan Entering into the Era of HVDC Technologies (Pakistan) ○ Regional Power Interconnections (World Bank) ○ High Voltage AC and DC Transmission for Power System Interconnection (Sri Lanka/Asian Development Bank) ○ Management Roadmap: Introduction of HVDC Technology in Pakistan (Pakistan) ○ Rationale for HVDC and HVAC (Canada) ○ Protection Perspective of HVDC Technology (Pakistan) ○ USAID SARI/EI study: Harmonization of Grid Codes, Standards and Operating Procedures for Transmission System Interconnection & for facilitating/Promoting CBET in South Asia ○ Critical Importance of Testing and Certification of Power System Equipment (Netherland) ○ South Asian Power Sector: Investment Prospects,

	<p>Challenges and Issues (USAID)</p> <ul style="list-style-type: none"> ○ HVDC Transmission System (India) ○ HVDC – the Chinese Experience (China) ○ CASA 1000 – Up to date Progress (China) • SEC's efforts with respect to diversity and coverage of different aspects of HVDC technology ensured a great knowledge sharing event.
Outcome	<ul style="list-style-type: none"> • Educated the professionals of power transmission utilities about new developments, trends and challenges with respect to the bulk power transmission; and • Exchange of knowledge and experience among the Member States in opting the HVDC or HVAC for their future power transmission projects particularly regional power inter-connections.
Impact	Enhancement of the expertise of power transmission engineers and planners of the SAARC Member States based on the latest innovations and the best industry practices pertaining to high voltage direct current / alternating current transmission.
SAARC Training Workshop on Experience Sharing on Coal Bed Methane (CBM), Underground Coal Gasification, New Delhi, India	
Proposed in FY	2015
Completed in FY	2015
Number of Participants	50
SEC's Input	<ul style="list-style-type: none"> • SEC's Knowledge Partner: Central Mines Planning and Design Institute (CMPDI), India; • Delegates from six Member States including Afghanistan, Bangladesh, India, Maldives, Pakistan and Sri Lanka joined this workshop; • Purpose of this workshop was to capitalize on the Indian success story with respect to achievements in the perspective of CBM. SEC managed an overwhelming participation from the host Member State India; Experts and delegates, dominated by SEC's Knowledge Partner for this Workshop i.e. M/s CMPDI along with a) Indian Institute of Technology Kharagpur; b) Directorate General of Hydrocarbons; c) Neyveli Lignite Corporation Limited, India; d) Deep, Oil and Natural Gas Corporation Limited; e) Deep Industries Limited; and f) Essar Oil Limited, Durgapur, India; and • This particular training workshop helped in creating awareness and development of CBM and coal within the SAARC Region. The workshop focused on 'Genesis of

	Coal and its Characterization'; 'Coal based Non-Conventional Energy Resources & their Development'; 'Global and Indian Scenarios'; 'Coal Extraction Methodology'; 'Underground Mining'; 'Coal Extraction Methodology'; 'Opencast Mining'; 'Characterization of CBM and UCG'; 'Laboratory Testing'; 'CBM Exploration', 'Exploitation and Its Uses'; 'Lignite Extraction and Its Potential Uses'; 'Coal Based Non-Conventional Energy Resource Assessment'; 'Underground Coal Gasification'; and 'The Way Forward for Development of Coal Based Non-Conventional Energy Resources'.
Outcome	Shared Indian success story of coal utilization for energy (coal bed methane), Included important way forward for the development of coal based non-conventional energy in the Region.
Impact	Created awareness as well as understanding of regionally indigenous opportunities, Sensitized the professionals and decision makers to prioritize development of coal within the Region.

Table 5.3: Seminars and Workshops Held under POSIT

5.3.4 Special Project Executed under POSIT

Details with respect to a special project launched under POSIT are provided in Table 5.4.

Development, Designing and Fabrication of Improved Cooking Stoves (ICS) Workable Model(s) for Cooking with Biomass for Rural Population in SAARC Region, Pakistan	
Proposed in FY	2011
Completed in FY	2012
Outcome	Improved Cooking Stoves (ICS) were developed and designed by SEC in 2012. The ICS technology developed by SEC is considered to be energy efficient (less consumption of Bio-mass, thus saving de-forestation), improved the health of women and children who are the prime users/stakeholders, and helped in improving local environmental conditions.
Impact	These stoves helped in improving energy efficiency and led to less consumption of biomass.

Table 5.4: Projects Executed under POSIT

5.3.5 Trainings Activities held under POSIT

Study Visit of SEC Professionals to Afghanistan	
Proposed in FY	2008
Completed in FY	2013
Outcome	<ul style="list-style-type: none"> • Developed networking with Ministry of Energy and Water, Ministry of Mines and other public and private sector organizations including international agencies; • Apprised the relevant offices with SEC's mandate, activities and potential benefits for Afghanistan; • Meetings with Ministry of Energy and Water, Ministry of Mines, Director Renewable Energy Projects, National Environmental Protection Agency, Ministry of Rural Rehabilitation Development, GIZ Afghanistan Energy Programme and other relevant offices; • Recommendations and follow up included: <ul style="list-style-type: none"> ○ Undertaking pre-requisites for organizing SEC's Programme activities in Afghanistan in the first quarter of 2014, ○ Maintaining close liaison with Afghanistan through different actions such as follow-up of invitations to Afghanistan for joining SEC's Programme activities and providing support to Afghanistan for developing proposals for SEC's future Programme activities.
Impact	Involvement of Member State Afghanistan in the mainstream programme activities of SEC besides organizing some future activities in Afghanistan.

Study Visit of 2-member SEC Delegation to Energy Institutions of Bhutan	
Proposed in FY	2008
Completed in FY	2009
Outcome	SEC Professionals visited the relevant energy institutions of Bhutan to develop synergies between SEC and important energy sector organizations/institutions in the Region in conjunction with the 5th meeting of the Working Group on Energy (Thimphu, 29-30 April, 2009) and some areas of cooperation were identified. The purpose of the visit was to familiarize with energy sector of Bhutan; visit some energy project sites; develop a linkage among energy related organizations in Bhutan and the SAARC Energy Centre; and to get inputs and suggestions from senior energy officials of Bhutan regarding the regional energy cooperation.
Impact	The visit helped familiarize the SEC with energy sector of Bhutan, and provided opportunities to learn from their operations. Future study visits to Afghanistan and India will enable comparisons between the policy structures of the relevant countries and adoption of best practices.
Participation of SEC Professionals in Conferences, Seminars and Study Visits to Energy Related Institutions in Asia	
Proposed in FY	2013
Completed in FY	2013
Outcome	The Programme In-charge of SAARC Chullahs (ICS) at SEC, attended Clean Cook Stove Forum organized by Global Alliance in Phnom Penh, Cambodia. The Forum was attended by 500 delegates from all over the world.
Impact	This forum proved useful for conducting the field trials of SAARC Chullahs during FY 2013.

Table 5.5: Trainings held under POSIT

5.3.6 Capacity Building held under POSIT

SAARC Dissemination Workshop on SEC Study on Cogeneration Opportunities in Sugar and Paper Industries in SAARC Member States, Sri-Lanka	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	18
Outcome	<ul style="list-style-type: none"> • Development of Regulatory Framework/Environment for Cogeneration; • Participation of State Energy Suppliers; and • Identification of pre-requisites such as a. financing needs to be established; b. private investment in cogeneration; and c. importance of cooperation between academia and industry.
Impact	Facilitation of cogeneration was carried out; from financing to academia involvement to private investment. This helped in boosting the production of energy from this source of energy which is considered an efficient and clean fuel.
SAARC Training Workshop on Power System Studies for Synchronization of Multiple Systems, Afghanistan	
Proposed in FY	2014
Completed in FY	2014
Number of Participants	36
Outcome	<ul style="list-style-type: none"> • Built capacity of the power planners/analysts in carrying out industry standard power system studies for development of short-term, mid-term and long-term power plans including generation adequacy forecasts and transmission system planning; • Facilitated the participants with hands-on working opportunity on the renowned power system analyses tool using their own data set; and • Spontaneous response was made available to the participants on various what-if situations regarding different scenarios and using multiple planning strategies.
Impact	This training workshop proved to be another building block for developing, sustaining and sharing the regional professional expertise in the field of energy, more specifically with respect to the internationally recognized software for power system planning and analysis.

Table 5.6: Capacity Building Held under POSIT

5.3.7 Key Performance Indicators

In this section, a comprehensive assessment has been carried out with respect to activities under POSIT, and categorized according to the five pre-defined key indicators.

Relevance

Activities under POSIT have been designed to create awareness among the Member States of the technological advances that can bring about enhanced energy efficiency. The numerous workshops and studies have enabled knowledge-sharing about the types of renewable energy and their applicability to the South Asian region; biogas, geothermal, wind energy, solar energy, power system planning, and analysis tools, etc. Therefore, it is appropriate to say that SEC has carried out activities pertaining to the POSIT Programme that are highly relevant to the SAARC region.

Quality and Effectiveness

The activities carried out under POSIT have been considered to be the most successful interventions by the SEC since its inception. The SAARC Training Workshop on Seismic Survey-data Acquisition, Processing and Interpretation facilitated the transfer of 2D/3D Seismic Survey technology and the sharing of management practices across the SAARC region. Through the workshop, experts provided training and increased the skill of the professionals in seismic data acquisition, processing, and interpretation which helped them in identifying and delineating potential structures accurately and enabled them to use the seismic technology with more confidence.

Moreover, the workshop on rural electrification helped in technology transfer and the sharing of best practices across Member States. With the use of micro financing, a new dimension has been paved for the expansion of renewable energy projects to the rural areas of the Region.

Coherence

All the activities under POSIT have directly created awareness on renewable energy and technological advancements in the Region. POSIT also included study visits of SEC professionals to the Member States such as Afghanistan and India that, in addition to recommendations of energy efficient technologies, provided support to the Member States to implement these recommendations. Such initiatives helped in promoting efficient use of energy within the Region, as well as in enhancing cooperation in the use of new and renewable energy sources in the Region, promoting participation in energy activities as well as supported the Member States in undertaking programmes that achieved these goals, as have been mandated under the broader emblem of SAARC.

Sustainability

A number of activities under POSIT will continue to benefit the Member States for years to come. The comprehensive study carried out by the SEC regarding factors that are critical to the success of renewable energy projects will help Member States realize the factors that they should take into account when evaluating the feasibility of future renewable energy projects. The studies on existing opportunities regarding untapped renewable energy source, such as geothermal energy, will remain applicable across the Region. In addition, the successful introduction of the Grameen Shakti Sustainable Model for rural electrification through renewable energy is another activity that has ensured sustainable development for

South Asia. Therefore, it can be concluded that the POSIT activities include workshops and studies that remain applicable to all the SAARC Member States, given their similar context and will prove beneficial to them in their endeavours to move towards renewable energy and technological advancements.

Participation

Various POSIT activities, spanning across all the SAARC Member States and stakeholders, have played an important part in achieving sustainability through successful technology transfer. Quite a few of programme activities under thematic area POSIT have been demand driven – included in the action programme based on the request by the Member States.

5.4 Feedback from Stakeholders and its Analysis

A significant number of activities were carried out under the thematic area of POSIT by the SEC Team. The general feedback from the stakeholders regarding these activities was that of approval. It was however felt that there was much more potential than was actually realized. Detailed feedback received from the stakeholders and its analysis is included in Section 7.2 of the Study.

6. Programme on “Rural Electricity for Poverty Alleviation” (PREPA)

6.1 Background/Purpose

The Programme on “Rural Electricity for Poverty Alleviation” (PREPA) has been designed to cater to the alleviation of poverty through rural electrification, which has plagued hundreds of millions of people across the SAARC Region, Afghanistan been hit the hardest. PREPA aims to play a useful role in helping to overcome the barriers prevailing in the use of renewable energy. It aims to contribute towards analysing the experiences gained, identifying the programmes that have been successful, evaluating the reasons for the successes and sharing knowledge of these across the Region.

6.2 Nature and History of Past Activities

Table 6.1 provided details of two activities undertaken by SEC under PREPA:

#	Reference	Programme Activity
1.	PRG - 40 / 2012 / PREPA	SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power Projects
2.	PRG - 47 / 2013 / PREPA	Comparative Study on Rural Electrification Policies in SAARC Member States

Table 6.1: Programme Activities under PREPA

6.3 Assessment of PREPA Activities

Summary of outcome and impact of programme activities undertaken in the domain of PREPA is provided in this section.

6.3.1 Summary of Outputs under the PREPA Programme

Chart 6.1 summarizes the activities conducted under the PREPA Programme:

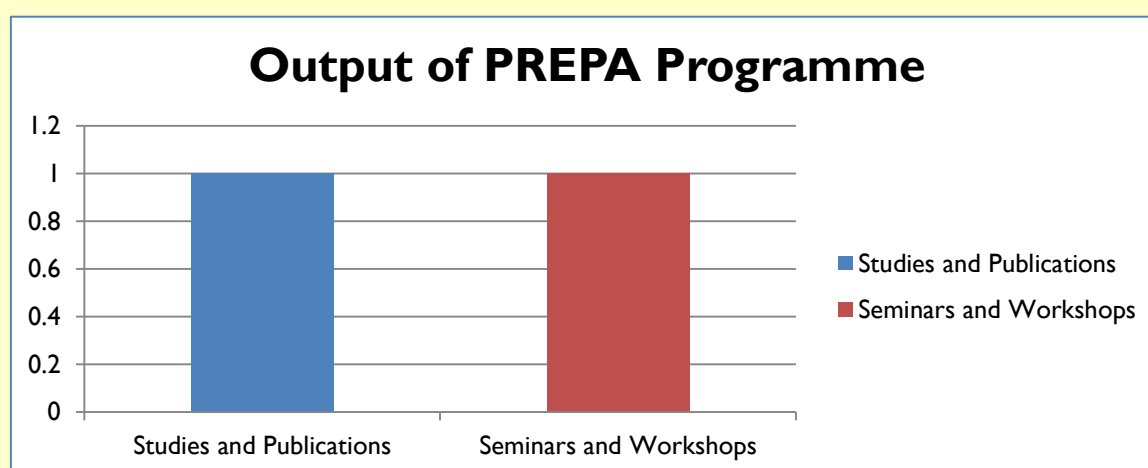


Chart 6.1: Output of PREPA Programme

6.3.2 Research Activities under PREPA

Comparative Study on Rural Electrification Policies in SAARC Member States	
Proposed in FY	2013
Outcome	Focused exclusively on rural electrification policies in the Member States which provided keys to successful implementation of rural electrification policies in the SAARC Member States.
Impact	Facilitated comparison of rural electrification policies and adoption of best practices.

Table 6.2: Research Activities under PREPA

6.3.3 Seminars and Workshops Held under PREPA

SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power Projects, Nepal	
Proposed in FY	2012
Completed in FY	2012
Number of Participants	40
Outcome	Helped sharing experience on technical, economic, awareness building, financing, management practices and innovative aspects of Nepalese Biogas Programme, solar home systems and micro-hydro for benefits of other Member States.
Impact	Facilitated the sharing of best practices and technology transfer among the SAARC Member States.

Table 6.3: Workshop Held under PREPA

6.3.4 Key Performance Indicators

The SEC has not been involved in too many activities pertaining to PREPA. The SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power Projects has shared experiences on technical and economic aspects of the power projects as well as management practices and other associated innovative practices. Through this, the SEC has been able to create awareness on best practices and technology transfer within the Region. A detailed comparative analysis of the PREPA activities can be carried out once SEC has undertaken more activities in the domain of PREPA in future. So far, PREPA activities have adhered to SEC's aim of creating awareness regarding rural electrification policies, and have served the objective of the SEC in supporting the Region in its efforts to enhance energy efficiency in the region.

However, despite all of the above, PREPA appears to be a critical area since the majority of the population of SAARC Member States is rural. Hence, SEC should consider identifying certain short, medium and long term goals in key areas critical for economic and social

development of SAARC Member States by ensuring sustainable, cost effective and least environmentally harmful energy sources for its people – this can be added to the next strategic plan for highlighting the priority of PREPA interventions. This of course should factor in efficient use of energy resources through conservation and deployment of appropriate technological and management measures.

6.4 Feedback from Stakeholders and its Analysis

The general consensus among stakeholders regarding PREPA activities is that though the effort is commendable, it is not enough. There needs to be more work done in the field of rural electrification primarily for the reason that a significant area under the SAARC region is rural. Other comments and analysis are provided in Section 7.2 of the Study.

7. Cross-Sectional Evaluation of SEC Interventions

7.1 Thematic Area Wise Comparison

This section compares how performance with reference to activities of each of the thematic areas is ranked with other thematic areas in terms of the five pre-defined KPIs. Table 7.1 shows a comparison of the programme activities according to their evaluation of the KPIs as was carried out at the end of each section, such as 2.3, 3.3, 4.3, 5.3 and 6.3.

Key Performance Indicators	Thematic Areas				
	PENT	PETREN	PROMO	POSIT	PREPA
Relevance	✓	✓✓	✓✓	✓✓	✓
Quality and Effectiveness	✓✓	✓	✓✓	✓✓	-
Coherence	✓	✓✓	✓	✓✓	✓
Sustainability	✓✓	✓	✓✓	✓✓	-
Participation	✓	✓✓	✓✓	✓✓	-

Table 7.1: Thematic Area Wise Cross-Sectional Comparison

Key:

- ✓✓ - Excellent Performance
- ✓ - Good Performance, Needs Improvement
- - Not applicable

The cross section evaluation of the thematic areas has been summarized in Table 7.1. This evaluation is concluded with the assistance of analysis carried out by the Study team as well as feedback extended by the stakeholders. It is clear from the evaluation that activities carried out under POSIT have been deemed to be most successful, by the stakeholders and the Study team as well, in terms of the five KPIs customized by the Study team for analysis. The programme activities under POSIT have managed to acquire a double tick in all categories of KPIs, signifying excellent performance in relevance, quality and effectiveness, coherence, sustainability, and participation.

With respect to recognition, POSIT activities are followed by PROMO. A common theme that has been noticed in the activities of PROMO and POSIT is that both these thematic areas have a relatively higher number of seminars and workshops being conducted. Workshops and seminars have also been considered the most successful mode of activity by the stakeholders. Therefore, it is reasonable to assume that to a large extent, the success of SEC activities will depend on the workshops and seminars that are being conducted under each thematic area. It is important to add here that PREPA does not have a significant number of activities carried out under its thematic area. Therefore a viable comparison between PREPA and the other areas is not possible at this stage.

7.2 General Feedback/Response from Stakeholders

7.2.1 Feedback from the Survey

During the course of the Study, a survey, available as Annexure - 7, was carefully designed and distributed among stakeholders in order to gauge their perspective on the programme activities carried out by SEC and the extent to which SEC was successful in achieving its objectives. It is useful to note here that a complete record of the surveys conducted (online as well as in-person) has been maintained and can be made available for reference purposes. The feedback received from the survey has been divided into two sections and is being provided in this section.

Participant Experience

The survey was sent out to a sizeable number (over 700) of beneficiaries in the SAARC Member States, but was filled in by only seventeen stakeholders (despite the repeated requests through emails), that too overwhelmingly from two countries, i.e. from Pakistan and Bangladesh. No response from Bhutan and India was received. Yet, the filled in survey forms do guide us to the trends in opinion about the SEC programme activities. Most of these participants were professionals and delegates who had joined SEC's programme activities. 50% of the participants had been involved with the SEC for thematic area PENT, whereas 31% of those surveyed had been involved with POSIT. A graphical representation of breakdown of the survey participants is provided through Chart 7.1 and Table 7.2:

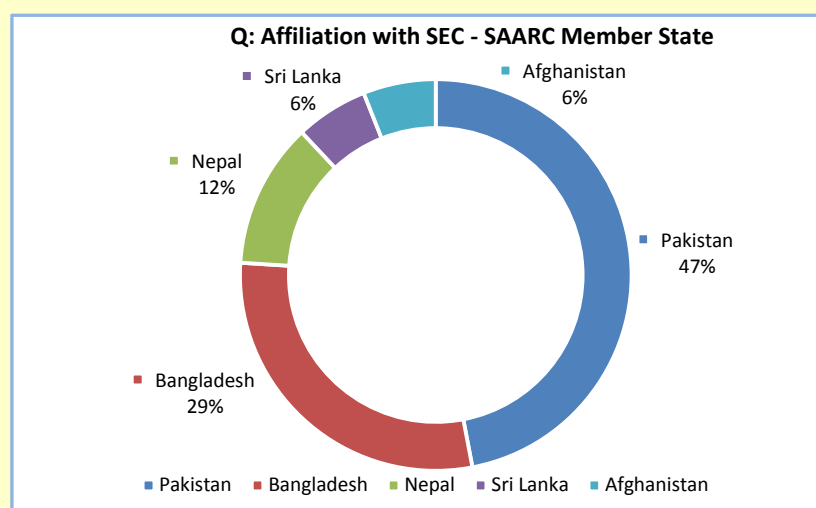


Chart 7.1: Breakdown of Survey - Affiliation with SEC

Question	Member State	Count	Column N %
Affiliation with SEC – SAARC Member State	Pakistan	8	47
	Bangladesh	5	29
	Nepal	2	12
	Sri Lanka	1	6
	Afghanistan	1	6
	Total	17	100

Table 7.2: Breakdown of Survey - Affiliation with SEC

From the participants' sample, most were found to be familiar with the mission of the SEC, with 29% voting each as extremely and very familiar with SEC's mission. This shows the success of the SEC in imparting its vision and ensuring stakeholders are aligned in the right direction, working towards similar aims as set down by the SEC. A breakdown of this response is shown in Chart 7.2 and Table 7.3:

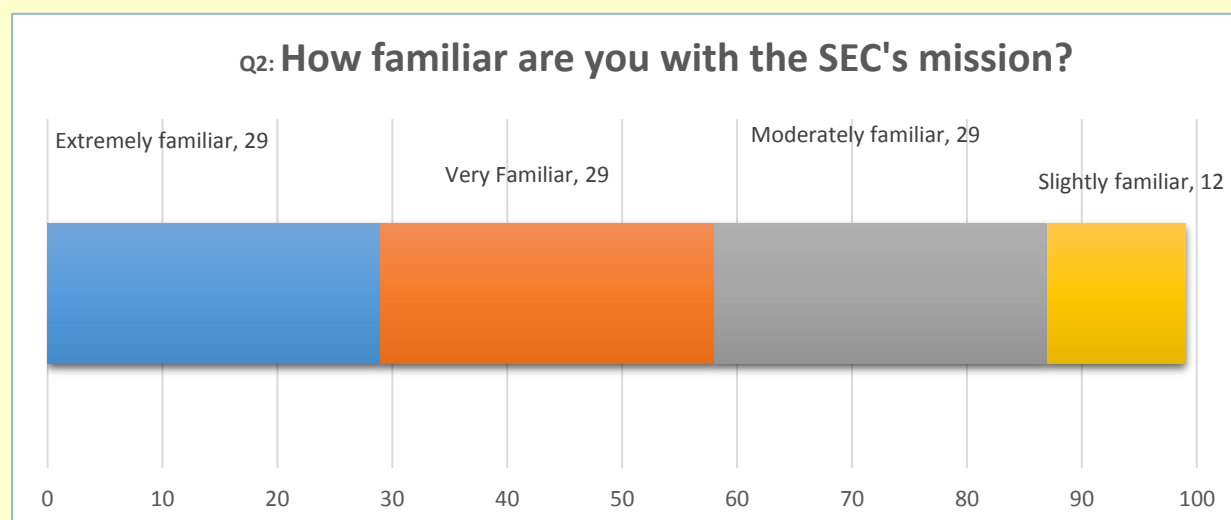


Chart 7.2: Breakdown of Survey: Familiarity with SEC Mission

Question	Response	Count	Column N %
How familiar are you with the SEC's mission?	Extremely familiar	5	29
	Very Familiar	5	29
	Moderately familiar	5	29
	Slightly familiar	2	12
	Total	17	100

Table 7.3: Breakdown of Survey - Familiarity with SEC Mission

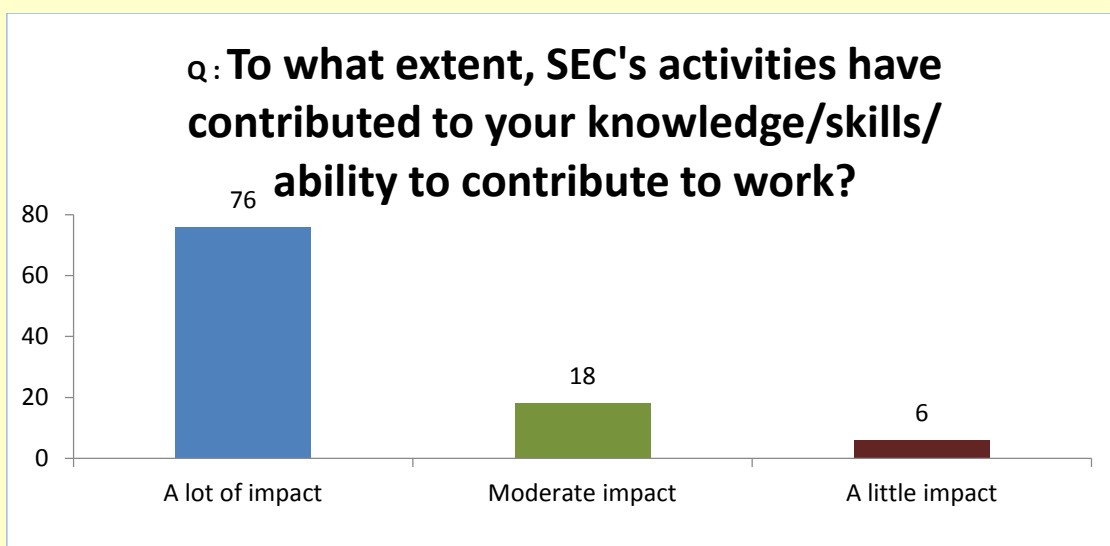


Chart 7.3: Breakdown of Survey - SEC's Contribution to Work

Moreover, all of the participants surveyed wished to remain affiliated with SEC in the future. Their motivation to do so was recorded as extremely high and evaluated to be close to 88%. This clearly shows that interaction with the SEC of the participants leads to them wanting to continue interacting with the SEC and be a part of its activities in the future as well. This pattern was seen across all ranges of interaction time-frames that the participants had with the SEC. To illustrate this, Table 7.4 was constructed from the survey responses

Question	Time Frame of Prior Association	Average Score on Keen to be Affiliated with SEC
Association Length with SEC	Less than and year	8.6
	Between 1-3 Years	8.5
	More than 3 years	9.6

Table 7.4: Length of Association and Keenness for further interaction

The Table 7.4 clearly shows that SEC has been able to keep the engagement levels consistent with stakeholders over time. This can be counted as a key strength of the SEC.

When asked about the degree of impact that the SEC experience had on the participants' Knowledge / skills / ability, 76% responded that SEC has contributed significantly in bringing that impact, as can be seen in Chart 7.3 and Table 7.5:

Question	Response	Count	Column N %
To what extent, SEC's activities have contributed to your knowledge/skills/ ability to contribute to work?	A lot of impact	13	76
	Moderate impact	3	18

Question	Response	Count	Column N %
	A little impact	1	6
	Total	17	100

Table 7.5: Breakdown of Survey - SEC's Contribution to Work

Lastly, a staggering 82% voted for extreme or high satisfaction with their experiences with the SEC. Responses from this section signify the SEC's success in keeping its stakeholders satisfied and delivering on the promises made with respect to the services provided to the participants and the expectations that participants had while engaged for the SEC interventions. A breakdown of this response is provided in Chart 7.4:

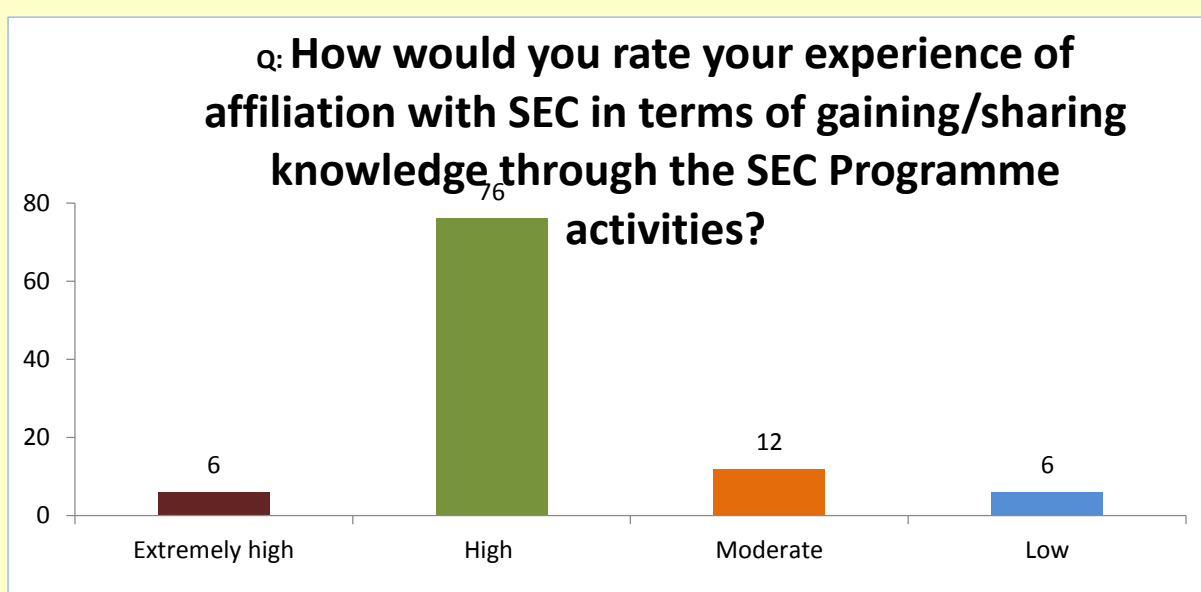


Chart 7.4: Breakdown of Survey - Experience of Affiliation with SEC

Question	Response	Count	Column N %
How would you rate your experience of affiliation with SEC in terms of gaining/sharing knowledge through the SEC programme activities?	Extremely high	1	6
	High	13	76
	Moderate	2	12
	Low	1	6
	Total	17	100

Table 7.6: Breakdown of Survey - Experience of Affiliation with SEC

Impact of SEC Interventions

This section provides the review of responses pertaining to the extent of impact of the SEC interventions. The respondents were asked to rate the quality of SEC programme activities; 88 % of which rated the quality as high. Responding to the question regarding the types of SEC interventions preferred by the participants, workshops and research studies proved to be the top ones. Special projects also received considerable favour.

It is noted that according to popular view, capacity building of regional professionals and exposure to the best practices in industry are the most useful aspects of the SEC initiatives. Moreover, the two defining features of the SEC that led to its success in the past have mostly been voted to be the SEC's team competence and commitment. Interestingly, for respondents who voted SEC activities' success as low also quoted these two factors as those leading to lower success for the SEC. What this particular survey outcome signifies is that the SEC's strength lies in the competence and commitment of its team. Respondents were also asked about the area that they would like to change, proved they are given the mandate to do so. 60% of them voted towards giving planning higher importance. The team believes that while the SEC planning activities is competency area for SEC, the execution is dependent on a number of factors including the input from other stakeholders which may sometimes be delayed. This factor may be considered as one of the reasons that respondents have identified a focus on planning. Judging by the responses, it may also be advised that SEC should assign higher preference to workshops and research studies over webinars and seminars since those have been reviewed to be more productive than the latter. A breakdown of some of the responses is available in Chart 7.5, 7.6 and Table 7.7, 7.8:

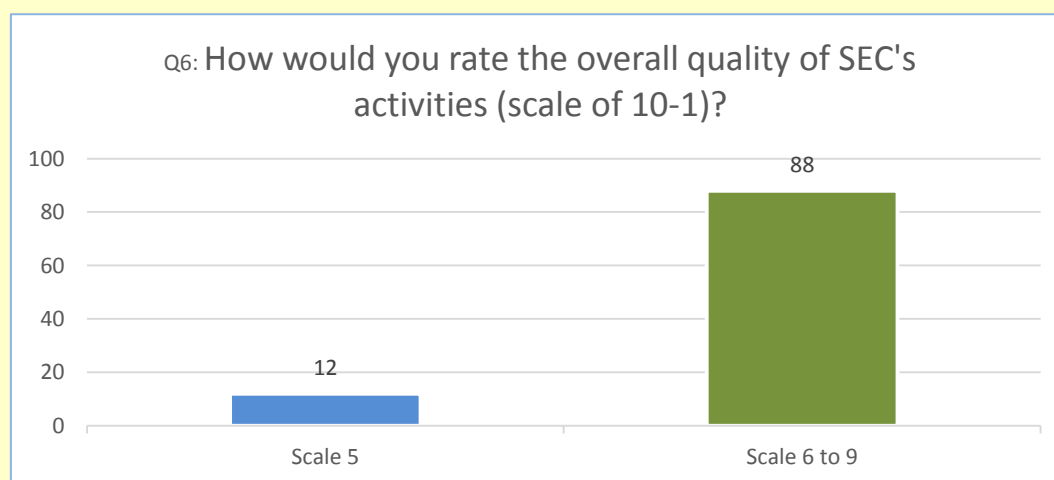


Chart 7.5: Breakdown of Survey - Ratings of Overall Success of SEC Activities

Question	Response	Count	Column N %
How would you rate the overall quality of SEC's activities (scale of 10-1)?	Scale 5	2	12
	Scale 6 to 9	15	88
	Total	17	100

Table 7.7: Breakdown of Survey - Ratings of Overall Success of SEC Activities

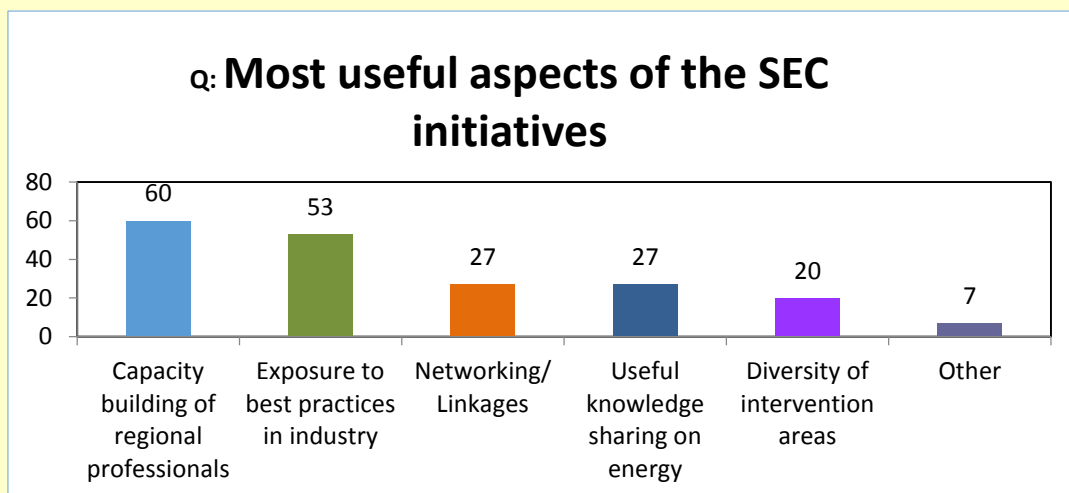


Chart 7.6: Breakdown of Survey - Most Useful Aspects of SEC Activities

Question	Response	Count	Column N %
Most useful aspects of the SEC initiatives	Capacity building of regional professionals	9	60
	Exposure to best practices in industry	8	53
	Networking/ Linkages	4	27
	Useful knowledge sharing on energy	4	27
	Diversity of intervention areas	3	20
	Other	1	7
	Total	15	100
Note: Due to Multiple responses, sum of percentage may be more than 100.			

Table 7.8: Breakdown of Survey - Most Useful Aspects of SEC Activities

Engagement Channels of Participants with SEC

The surveys also help identify the channel through which interaction with the SEC takes place. This is summarized in Chart 7.7 and Table 7.9:

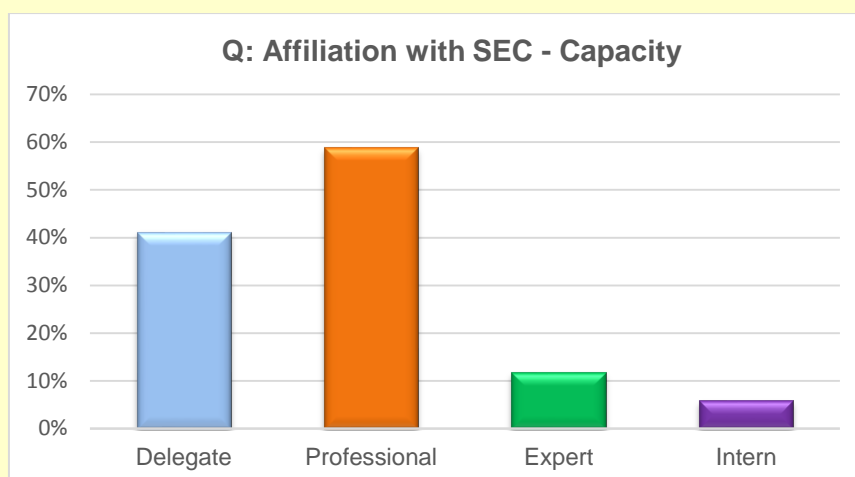


Chart 7.7: Breakdown of Survey – Affiliation with SEC

Question	Response	Count	Column N %
Affiliation with SEC – Capacity	Delegate	7	41
	Professional	10	59
	Expert	2	12
	Intern	1	6
Note: Due to Multiple responses, sum of percentage may be more than 100.			

Table 7.9: Breakdown of Survey – Capacity of Association

Gaining further insight into the various ways in which these respondents interacted with the SEC as well as their motivations is important because it helps understand how the SEC can tailor its activities. This is summarized in Chart 7.8 and Table 7.10 as follows:

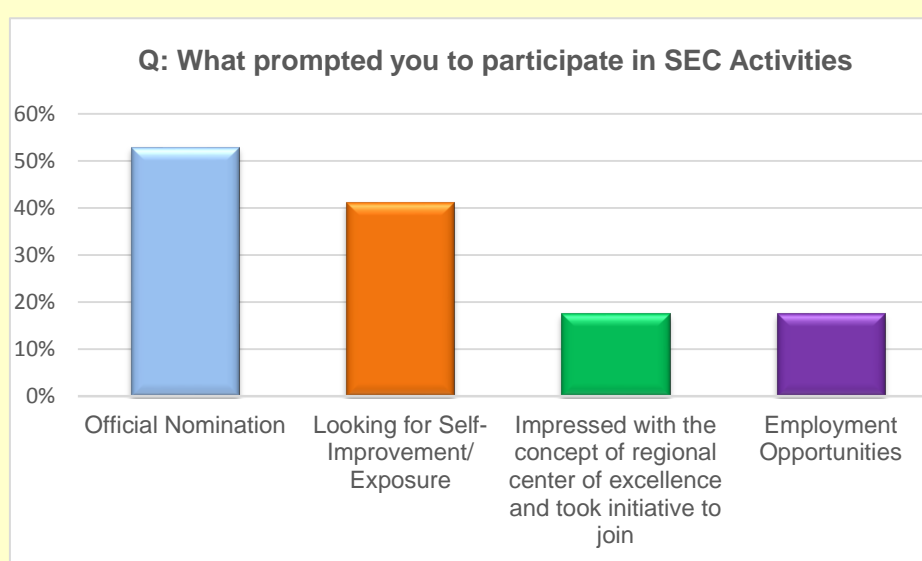


Chart 7.8: Breakdown of Survey – Motivation for Participation in SEC Activities

Question	Response	Count	Column N %
Affiliation with SEC – Capacity	Official Nomination	9	53%
	Looking for Self-Improvement/ Exposure	7	41%
	Impressed with the concept of regional center of excellence and took initiative to join	3	18%
	Employment Opportunities	3	18%
Note: Due to Multiple responses, sum of percentage may be more than 100.			

Table 7.10: Breakdown of Survey – Motivation of Participation

These point to a very encouraging trend for SEC and a potential segment where SEC can deliver an enhanced impact by focusing on activities that are a source of motivation for stakeholders. The key target area here are prospective participants looking for self-improvement and exposure which SEC can target through increasing the reach of its knowledge sharing activities. This has been translated into inputs into the way forward for SEC.

Assessment of One-on-one Interviews by Stakeholders

A significant aspect of the Study conducted by the team was the one-on-one interviews held with the stakeholders of the SEC. The purpose of this strategy was to solicit views and comments and seek assistance directly from the stakeholders in carrying out analyses of the impact of the various programme activities carried out by the SEC since its inception. Questionnaire for Interview is available as Annexure 8. It is pertinent to note here that a record of all interviews has been maintained and can be made available for reference purposes.

7.2.2 Individual Interviews

A select number of professionals, list is attached as Annexure 9, were shortlisted and interviewed via video conferencing as well as in-person. These professionals consisted of a diverse group from across the Region, having been affiliated with SAARC Energy Centre in various capacities; some were even among the founding professionals of the SEC whereas others consisted of those who have conducted various studies for SEC in the past and represented SEC on several international/regional platforms.

Key Impact of SEC Initiatives

This section provides important areas identified by the interviewees with respect to the performance of SEC through its programme activities since its inception.

SEC Vision

It is unanimously believed that the SEC has been quite successful in realizing its vision. The SEC is perceived to be going in the right direction, helping Member States in developing their capabilities in the energy perspective. The SEC is applauded for its efforts and emerging as a credible, reliable, gathering point for energy related data, information and concepts throughout the Region.

Regional Integration

The popular view amongst the experts remains that the SEC is a regional centre like no other. Its programmes have historically been well focused, with unprecedented strategic operational plans that focus a great deal on enabling equal participation for all Member States. The SEC greatly cooperates with regional and international organizations i.e. ADB, USAID-SARI, etc.

Moreover, it is because of the efforts of the SEC, such as the SAARC Regional Trade Study, that investment opportunities worth several billion dollars have been realized. The business community has come to realize the benefits of energy cooperation. Such efforts have resulted in increased cooperation amongst the Member States. For example, when a certain programme is proposed for the Region, other Member States put forward their own case studies to benefit from, a practice that was not there previously.

Energy Trade

Through the efforts of SEC, energy trade in public and private sectors across the Member States was initiated. For example, trade between Bhutan and India did already exist but post-SEC, the extent of it increased significantly. In Nepal, where electricity was previously a natural resource and thus not available for trade, efforts were made towards amendment in laws through parliament, and electricity was changed into a commodity; now this commodity is being traded amongst the Member States. Moreover, the SAARC Framework Agreement on Energy Cooperation is another such initiative made possible through SEC's efforts for promoting cross border electricity trade.

Through its programme interventions, the SEC introduced the SAARC Leaders' vision of SAARC Energy Ring, which had a strategic dynamic way forward encompassing subjects such as oil and gas, renewable energy, technology transfer, coal and energy efficiency. The concept and awareness SAARC Energy Ring brought forth significant investments in the already existing projects enabling bilateral trade in the Region; currently SEC is striving to convert it into multilateral interconnections and trade.

Elimination of Energy Poverty

The SEC has made commendable efforts towards the elimination of energy poverty. These efforts have been recognized and appreciated by the community at large, steps such as Grameen Shakti project for the distribution of solar lamps. However, it is felt that this has not been given the due attention by SEC which it deserves. It is, therefore, suggested that the SEC focus more on green and sustainable resources of energy to prioritize energy access across the Region.

Competence of SEC Team

The general consensus amongst professionals interviewed was that the SEC comprises of a competent team, where skilled professionals have been appointed. The SEC is working efficiently and the team is doing its best in keeping up with the mandate of the SEC.

Moreover, it is because of the team's competence that seminars and workshops held by SEC gain significant success, and are attended by considerable number of professionals, leading to the exchange of ideas and information sharing between Regional experts and delegates.

Research Work

The SEC's research initiatives have been greatly appreciated and recognized by the professionals interviewed as part of the Study. It is believed that the research work is the result of focus and commitment, and lays the foundations for broad-based cooperation among the Member States in various cross-cutting energy issues.

SAARC Framework Agreement on Energy Cooperation (Electricity)

According to some of the interviewees, signing of the SAARC Framework Agreement on Energy Cooperation - Electricity (FAECE) during November 2014 was a significant achievement for the SEC. This agreement allows for unrestricted cross-border trade, commercial negotiations of PPAs, non-discriminatory open access, private sector trading and participation in power exchanges. However, a shortcoming that was realized and desired by the experts was that of implementation of the agreement in true spirit so as to increase the volume of power trading within the Region.

7.3 Assessment of SEC's Adherence to Materialize Vision of SAARC Leaders

The concept of the SAARC Energy Ring was envisioned in the 12th SAARC Summit held in 2004. Since it started functioning in 2008, the SEC has been involved in a number of activities in order to realize the vision set forth pertaining to the conceptualization of the SAARC Energy Ring. The efforts through these programme activities may be rated as the most critical and vital with respect to changing the lives of the people of South Asia through energy integration. Some of these activities are as follows:

7.3.1 Scenario Analysis for Identification of Interconnection Opportunities

The Asian Development Bank (ADB) funded and collaborated with the SEC in carrying out the study on South Asia Regional Power Exchange Study (SARPES). This study analysed the mutually beneficial economies of the SAARC-wide interconnected power system towards the utilization of the vast hydro-electric potential in Nepal, Bhutan and Central Asia to meet the growing demand in other parts of the power system. The study also conducted thorough analysis of cross border power trading around six proposed interconnection and grid reinforcement projects covering almost the entire Region.

7.3.2 SAARC Regional Energy Trade Study (SRETS)

This study brought to surface the numerous benefits of establishing a regional power market for the purpose of enhancing regional energy trade in the SAARC region.

7.3.3 Review of Electricity Laws and Regulations of SAARC Member States

The SEC collaborated with the SAARC Japan Special Fund in 2012 and conducted a study on "Electricity Laws and Regulatory Frameworks of Member States". This study reviewed electricity laws, acts and regulations of the SAARC Member States. It also identified the existing legal barriers, and suggested reforms in the existing laws and regulatory frameworks of the Member States so as to facilitate energy trade in the South Asian region.

The above activities demonstrate SEC's commitment in realizing the vision set forth by the SAARC leaders with respect to the conceptualization of the Energy Ring. SEC collaborated with international donor agencies to carry out activities that explored potential opportunities in the Region bringing energy efficiency in the region, whilst simultaneously reducing the region's existing heavy dependency on oil imports. With respect to generation, the ultimate objective of SAARC Energy Ring is to reduce foreign dependence and achieve the maximum utilization of the resources available in the Region. However, it is felt that the vision needs to be expressed by scaling it down into small targets all ultimately contributing to the actual realization of SAARC Energy Ring within a certain time frame. SEC needs to usher Member States to enforce minimum standards making regional energy ring possible in distant future. SEC may like to review its thematic areas being diverse and remotely linked to energy security and sustainability. A more outcome based approach could thus be applied in devising the next strategic road map, extending programmes, studies already conducted (a set of which has been reviewed exclusively earlier in this section) with further inputs and refinements.

7.4 Critical Review of SEC's Vision vis-à-vis Current Regional Energy Security and Sustainability

SEC, a regional centre of excellence on energy matters, expected to bring reality into the dream of South Asian Energy Ring as conceived by its founding leaders, was also assigned with a range of goals and objectives such as addressing regional and global energy issues, collection of regional data, regional electricity grid and natural gas pipeline, promotion of efficient and sustainable use of electricity through conservation, efficient use of energy resources and use of renewables. These goals were later translated into five thematic areas for undertaking various programmes as analysed under section 2, 3, 4, 5 and 6.

SEC has executed various programmes under these thematic areas; however, the position of Member States with respect to these areas has not been ever analysed. Thus SEC can transform its trainings and workshops for regular capacity building of energy professionals in the Region and this could even be linked to some regional/international programmes accrediting energy sector practitioners. This way, the Member States will not only be able to learn from each other but also adopt best practices that are in use by the accredited energy sector practitioners, across the Region as well as beyond.

SEC can thus be a prime mover for introducing energy indices for the Region promoting efficiency, standard operations, enforcement of these standards with the support of regional energy ministries etc. The key to SEC approach in its various programmes is to promote adoption of best practices, standardization where possible in the management and exploitation of energy resources and attraction of private investment.

8. Institutional Improvement

This section deals with some critical suggestions for SEC's institutional improvement. Primarily these suggestions are meant to strengthen the SEC as an institution and bring it at par with international quality standards. Though a detailed evaluation of SEC establishment is neither possible nor included in the scope of the Study, however, in view of critical nature of the subject and impact on its effective function, SEC is suggested to review its organizational set up apart from improving its status from a mere Centre to an accredited institute. The review should be geared towards invigorating SEC for successful implementation of the next strategic plan. Some of other key areas to focus with reference to the suggested restructuring of SEC are as under:

8.1 Development of Process Maps for Critical Processes within SEC

Like any other organization, SEC can better manage its activities by development of process maps detailing activities, responsibilities, and decisions at an appropriate level. The development of process maps is envisioned to be a very helpful tool as adopting this tool would standardize the SEC's functions to a greater degree of compliance with formalized procedures and would also make available a benchmark to refer to while carrying out their programme activities.

Process maps would also help SEC in assessing gaps and issues with their current working procedures and align these procedures to ensure not only better compliance but more efficiency throughout their processes. The Study proposes the following process maps:

- a. Designing programme/action plan for the forthcoming year;
- b. Organizing an approved programme activity (Workshop, Seminar, Training, Webinar, etc.);
- c. Outsourcing the short term research study;
- d. Undertaking in-house short term study;
- e. Launching a pilot/special project;
- f. Publishing of study reports;
- g. Publishing of workshop/seminar/study DVDs;
- h. Annual strategic review of the programme activities/current year's action plan;
- i. Impact assessment of the SEC (every 2 years as per harmonized rules);
- j. Appointment of professionals;
- k. Appointment of GS Staff;
- l. Organizing of Governing Board Meeting;
- m. Preparation of Annual Budget; and
- n. Publishing of Newsletter

A few of these process maps have been developed and added in this Study as Chart 8.1 – 8.4. However, it is pertinent to highlight that by no means are these templates final and ultimate; these should be discussed in-house, debated and improved before implementation. Further, SEC is highly encouraged to add more such processes as frequent application of this tool will help them in strengthening the SEC as an institution through formalized and well defined procedures which are subject to review for sustainable performance improvement.

There are quite a bit of software available that enable users to create process maps for daily processes of an organization. Microsoft Visio, one of the popular examples, has been used by the Study team for developing the templates.

8.2 Programme and Portfolio Level Management

Based on the evaluation of SEC organogram and its workings, the Team is of the view that performance of SEC would benefit by having an integrated programme/portfolio level management professional to contribute toward programme/portfolio management and keeping track of how all the programmes and their impact feed into the mission, vision, objectives and goals of SEC. This professional can serve as a focal point for functions such as:

- a. Coordinating the process for design of annual programme activities (action plan)
- b. Programme Monitoring and Evaluation

By implementing programme/portfolio management, SEC may enjoy several advantages including:

- a. Better decision making with respect to designing and implementing programme activities;
- b. Improved resource allocation to the programmes;
- c. Improved performance through feedback from programme monitoring and evaluation;
- d. Executive and Governing Board level programme oversight;
- e. Improved overall performance of SEC; and
- f. Enhanced value for the stakeholders

8.3 Review of Procedure for Selection of Experts

As mentioned briefly under Section 1.3, the Study Team received a set of documents pertaining to the procedure for selection of experts for outsourced programme activities. These documents included the following:

- a. Concept Paper;
- b. Web Advertisement;
- c. CV/Resume Template;

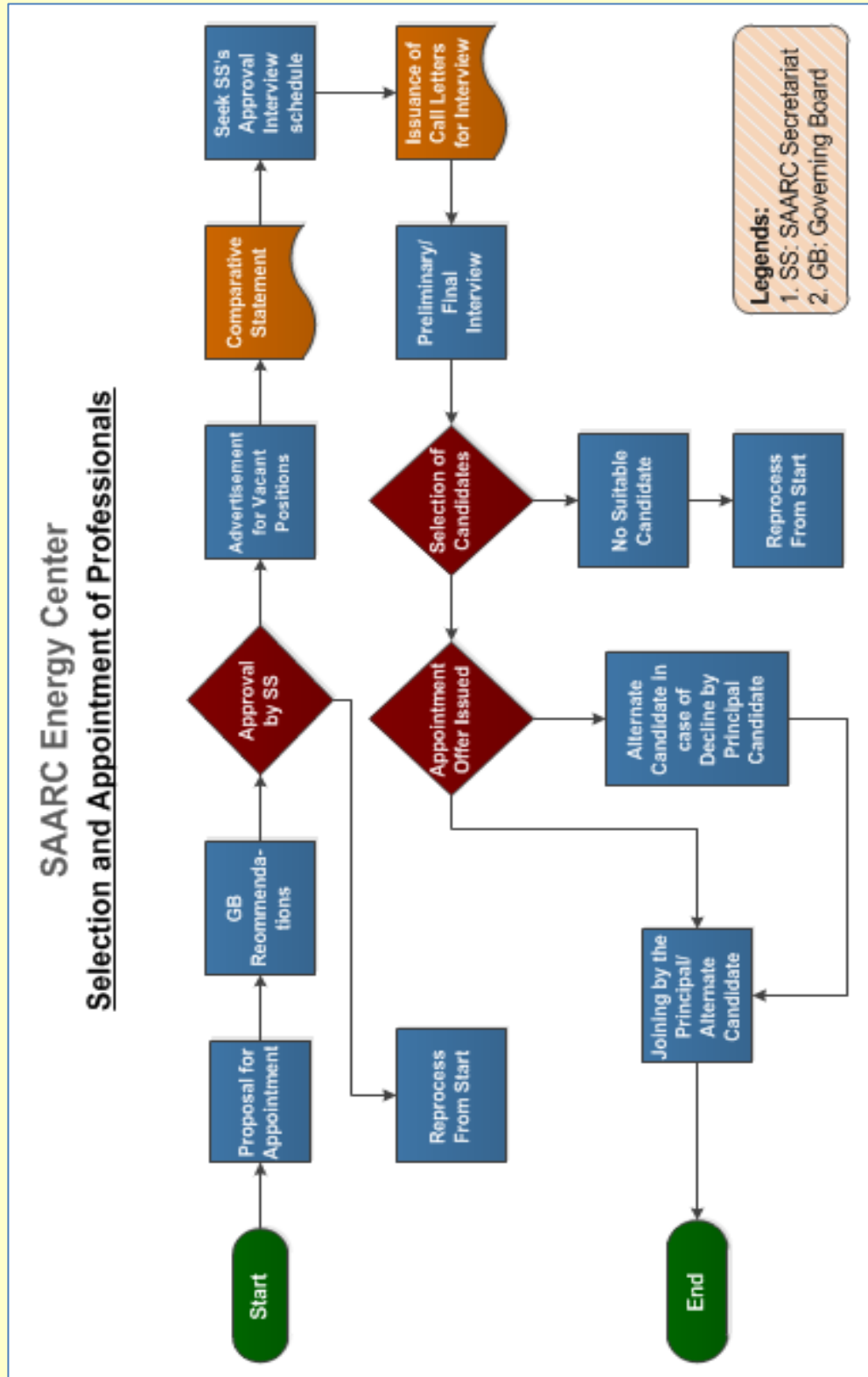


Chart 8.1: Process Map 'Selection and Appointment of Professionals'

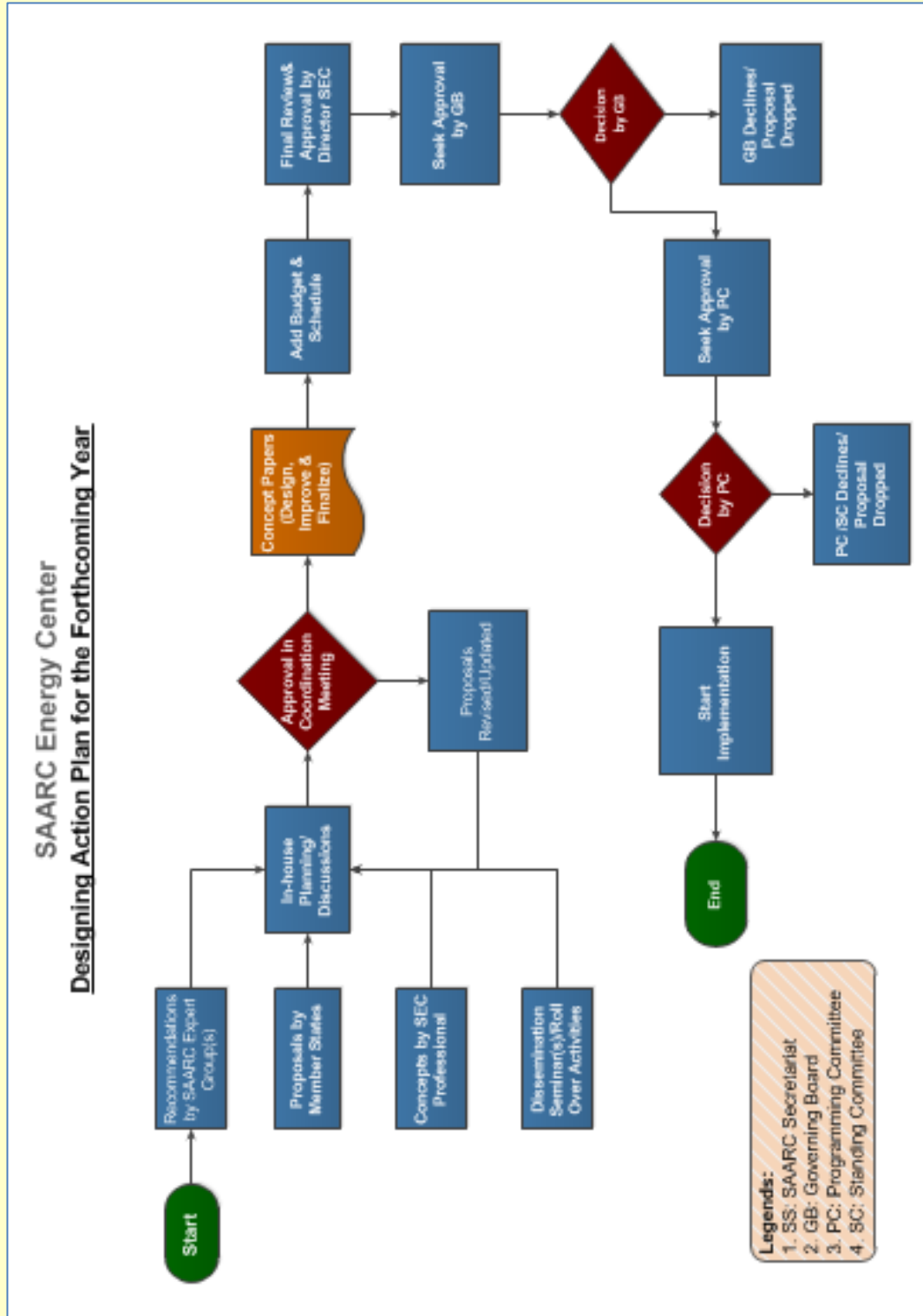


Chart 8.2: Process Map 'Designing Action Plan for the Forthcoming Year'

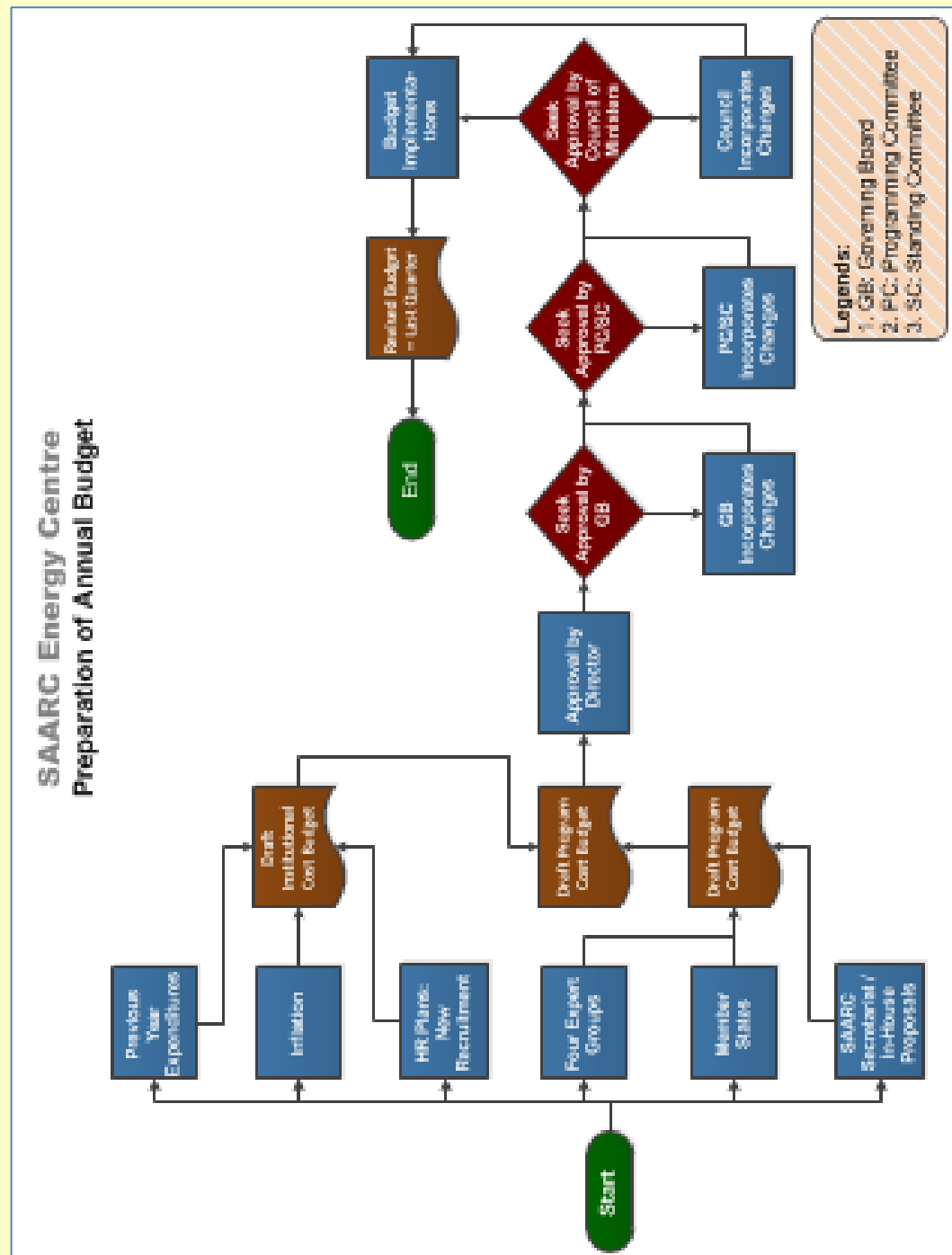


Chart 8.3: Process Map 'Preparation of Annual Budget'

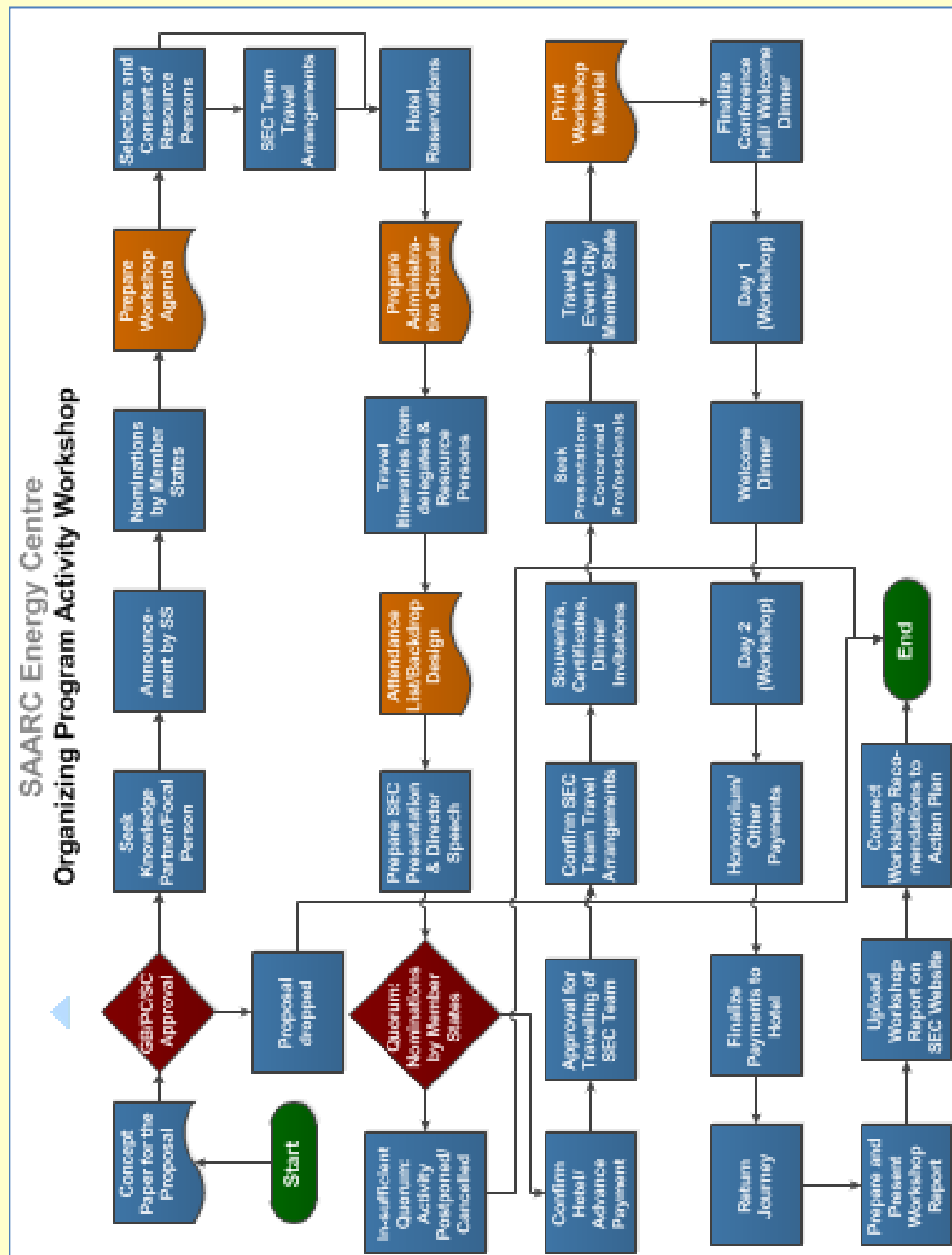


Chart 8.4: Process Map 'Organizing Programme Activity

- d. Evaluation Criteria and Comparative Statement;
- e. Sample Service Agreements; and
- f. Sample Notice to Proceed

The Study Team believes that the current process for the selection of experts is comprehensive enough as it is, however, it would like to propose a few changes to the evaluation criteria and sheet. The original evaluation criteria, currently being followed by the SEC, is attached with the study as Annexure 5, whereas the proposed revision in the criteria is described in this section.

8.3.1 Establishment of the Evaluation Committee

The establishment of an evaluation committee is crucial to ensure a fair and objective evaluation of the technical and financial proposals. As each member of the evaluation committee is required to be familiar with the TOR and the evaluation criteria, it is recommended that the evaluation committee should be functioning throughout the year.

The evaluation of proposals must be based on the professional judgment of competent and impartial evaluators. Although all the members of the evaluation committee need not be experts in specific fields covered by certain programme activity, individuals who do not have any knowledge of the relevant area should not be engaged. It is preferable that the members of the evaluation committee should have prior experience in the evaluation process. The essential purpose of the committee is to prepare the evaluation report of the technical and financial proposals and determine the recommendation for award.

8.3.2 Evaluation Criteria for Technical Proposals

Following criteria may be used for the evaluation of proposals:

- a. **Experience of the experts** (Expert's general experience and record in the relevant field);
- b. **Adequacy of methodology and work plan** (Adequacy of the proposed approach, methodology and work plan); and
- c. **Qualifications and competence of staff** (Experience and records of the staff members to be assigned to the work).

The relative importance of the three criteria will vary with the type of expert services to be performed, but in the overall rating of the proposals most weight should normally be given either to 'c. Qualifications and competence of staff', or 'b. Adequacy of methodology and work plan'.

Additional criteria may be added depending on the nature of the work assignment. These may include a. Suitability with respect to of transfer of knowledge; b. Support facilities at the disposal of organization of the experts including support resources at head office; and c. Proposal presentation - Overall quality of the presentation of the proposal. The weight distribution of the above criteria would be best decided by the SEC itself, according to the nature of the assignment, its scope and other such variants. For summarizing the cross-section evaluation process, a comparative statement is being proposed through Table 8.1.

A breakdown of the three main criteria is provided in the following section:

a. Experience of the Experts

Relative importance of the criterion on expert's general experience and record with respect to the relevant field/area will vary according to the type of expert services to be performed. This may include:

- Experience of international projects of comparable size, complexity and technical specialty
- Experience in other developing countries under comparable conditions

b. Adequacy of Methodology and Work Plan

The criterion on adequacy of the proposed approach, methodology and work plan should be evaluated carefully as these are the key factors for evaluating the proposals. Sub-criteria for evaluating this component of the proposal may include a. Technical approach and methodology; b. Work Plan; and c. Organization and staffing.

c. Qualifications and Competence of Staff (applicable where entities are being considered for award)

The proposed committee should evaluate the staff members of the potential experts based on the qualifications and experience. For evaluating staff members, only those conducting essential part of the assignment are recommended to be considered; staff members with relatively low importance need to be ignored. This criterion may include sub-criteria such as a. General qualifications (education, length of experience, types of position held, length of service with the firm, etc.); b. Suitability for the project (experiences of performing the duties which will be assigned to them in the project); and c. Familiarity with the language and the conditions of the Region (understanding of the local culture and relevant situation).

8.4 SEC's Knowledge Resource Bank

8.4.1 Introduction

The Team had the opportunity to access the rich pool of knowledge the SEC has accumulated over the years and understand the nature of its importance. SEC's programme activities in the past have generally consisted of:

- a. Research Activities and Publications;
- b. Seminars and Workshops;
- c. Capacity Building and Training Activities;
- d. Pilot/Special Projects

Given the nature of these interventions, it is evident that SEC's programme activities tend to produce a significant knowledge based output. The preservation and management of this content would assist the SEC in carrying out its activities more efficiently without duplicating the efforts. Consequently, the Team proposes a Content Management Software (CMS) or Document Management Software for implementation at SEC. The primary features of the required CMS would be:

- a. Ability to assist for developing and managing SEC's Knowledge Resource Bank;
- b. Accessibility and flexibility of the tool;
- c. Seamless/relative ease of integration into the SEC's workflow; and
- d. Cost-effectiveness of the solution

Consultants' Names	[Name of Consultant 1]	[Name of Consultant 2]	[Name of Consultant 3]	[Name of Consultant 4]
Criteria	Scores	Scores	Scores	Scores
Experience				
Methodology				
Proposed staff				
Training				
Support Facility				
Proposal Presentation				
Total Score *				
Assessed Rank				
* Proposals scoring below the minimum qualifying score of [number] points have been rejected.				

Table 8.1: Comparative Statement for Cross-sectional Evaluation of the Experts

8.4.2 Assessment of Current Situation

The Team thoroughly investigated the options available with respect to CMS satisfying SEC's requirements through need assessment. The Team understands that SEC is endowed with professionals from different Member States from public as well as private sector. However, there is no standard protocol for management and retrieval of important data and information. Hence, there lies a strong justification for implementation development of SEC knowledge database. The Team is convinced that the SEC would benefit from a formal CMS, a platform that would not only allow the effective referencing and storage of the data that SEC has, but also allow the professionals working within the SEC and collaborating with it, to have a synergetic working space to accelerate knowledge sharing.

In view of these requirements, the team after searching several options which included:

- eXo Platform
- Novo Knowledge Base Software
- Confluence

The features of these packages are highlighted in Table 9.1.

Services Offered

Services Offered	eXo Platform	Novo	Confluence
Advanced Search			
Cataloguing/Categorization			
Collaboration			
Document Management			
Discussion Boards			
Full Text Search			

Table 9.1: Services Offered by Content Management Software

After identifying software packages that fulfilled the need of the SEC, the Team undertook trial evaluation of these packages to test and verify the option that would be most appropriately suited for the SEC.

8.4.3 Recommendations for SEC Knowledge Resource Bank

The team recommends Confluence, a software package by Atlassian. Confluence was chosen not only on the basis of its rich features, but because Atlassian also offers other excellent packages that the SEC may choose to adopt in the future to refine their work flow and project management practices.

Confluence comes in four different variants and the SEC may choose which one to procure based on what fits their requirements. For summary purposes, the features of the base package along with the features that each add-on brings are documented. The base package of Confluence offers the following features:

- a. Unlimited workspaces;
- b. Rich content editor;
- c. Page hierarchy and versioning;
- d. Custom page templates;
- e. Blogs and threaded discussions;
- f. File storage, search, and versioning ;
- g. Personal and team tasks ;
- h. iOS and Android mobile support ;
- i. JIRA integration;
- j. Group, user, and content permissions; and
- k. Add-ons via the Atlassian Marketplace;

Training and Support for using Confluence is available via the following means:

- a. Documentation
- b. Webinars
- c. Online Support
- d. Customer Representatives

As a point of reference, major organizations using Confluence include:

- a. Autodesk
- b. Twitter
- c. Audi
- d. CSIRO
- e. Dow Jones

The SEC is strongly advised to procure a trial version of the software first to verify that its needs are adequately met by the recommended software package. It is hoped that by implementing a CMS, the productivity of the SEC can be improved considerably. This may also help the SEC in increasing the efficacy of planning activities and collaboration with geographically spread out stakeholders and improve on this aspect which was identified in the surveys.

9. Conclusions and the Way Forward

The Study concludes that the SEC being the only inter-governmental organization specializing in energy sector in the Region, has generally been playing its role very well through different kinds of programme activities, in the light of vision set forth by the SAARC Leaders. SEC has been able to raise awareness about and build capacity regarding some of the pressing energy sector issues and challenges confronting the SAARC Member States both as individual countries and as the Region collectively. The SEC's interventions have also been an ample experience-sharing opportunity for the regional officials, professionals and experts. By and large, the stakeholders are also satisfied with the SEC's performance. However, there is still great room for improvement especially in terms of thematic coverage and nature of the SEC's activities; the mechanism from conception to implementation; and follow-up of the activities, etc. to revolve around a programme cycle methodology.

SEC has the potential to emerge as the Region's knowledge bank on energy, the go-to-institution for any issue related to energy sector in the Region; for this purpose, it should come to the forefront through its activities. In this regard, it would not be out of place to highlight the possibilities of scaling up the status of SEC, from presently a 'centre' to a full-fledged Institution excelling in all issues related to energy – from macro to micro – through short term research, capacity building, awareness raising and advocacy. In view of ongoing restructuring of SAARC regional centres, the Study Team proposes that SEC, with an upgradation in view, may be restructured in a way to enhance its scope so that, as technical arm of the SAARC, it could become a role model for other SAARC regional centres.

9.1 Potential for Greater Impact

The experts unanimously believe that there lies immense potential with the SEC for great cooperation and therefore higher impact within the energy sector across the Region. Hence, there is a significant need to sensitize the governments of the Member States about this potential. It is acknowledged that SEC has undertaken significant research in different dimensions of energy. It is high time that SEC move towards developing the implementation mechanism, as an institution under the umbrella of SAARC. Capacity building through trainings and expertise sharing shall continue on its own pace. Another idea that can potentially tackle one of the areas of interest identified through the surveys is the development of more distance learning courses/trainings that may enhance knowledge sharing potential of the SEC.

9.2 Enhancing Professional Expertise

Efforts of the SAARC Energy Centre would be realized in a more effective manner provided SEC's professional team is represented by at least one professional from each of the Member States. It has been noticed that none of the professionals from Member States Afghanistan, Bhutan, India and Maldives has ever joined SEC. It is also on record that not too many electrical engineers have been keen to join the SEC or could not qualify for appointment. In order to have diversified and better quality intellectual/professional resource at the disposal of SEC, it is suggested to rationalize the remuneration with respect to market standards. This would ensure better options for selection and would ultimately reflect in improved performance of the SEC.

With respect to selection of professionals, it is suggested to enhance the capacity of the interview panel by including regional experts from open market who may join the interview through internet, video conferencing, etc. For this purpose, SEC may maintain a database of relevant professionals from the SAARC Member States. This data base would be required to be updated based on the input from members of the Governing Board.

Within this dimension, the SEC may launch an annual internship programme. The development of this programme can be tailored around students from different disciplines to suit the needs of each of SEC's programme area. Benefits of this would include SEC enhancing the impact of its activities as well as development of human capital in the energy sector in the SAARC region.

9.3 Overcoming Budgetary Constraints

During the course of the Study, it has been observed that the SEC has limitations when it comes to budgetary considerations. A couple of the recommendations to cope with such limitation are as follows:

- a. There exists a budget constraint in the scaling up of pilot projects. Therefore, these pilot projects should be implemented with the assistance of other institutions including International Financial Institutions such as World Bank, Asian Development Bank, USAID, etc.
- b. The budget for SEC activities may be supplemented with collaborative programmes with other organizations, thereby sharing the financial burden with other institutions while adding to the technical and administrative resources.

9.4 Strengthening the Feedback Process

While conducting the Study, the Team faced great hindrance with respect to getting thorough feedback from the stakeholders involved in SEC's programme activities. The Team could not get timely and considerable response despite seeking the feedback (through emails) from a majority of participants twice or thrice. Therefore, it is suggested that SEC should strengthen the process of taking feedback from the participants by distributing the feedback forms at the end of each activity. Feedback can be made a standard item of the organized event. For this purpose, a template of feedback format, attached as Annexure – 10, is being proposed.

9.5 Enthusiastic Participation by Member States

The SEC approach is comprehensive enough and focuses on the objectives in the most optimal manner. However, it is observed that all Member States do not adequately participate in the workshops, thus making the interventions less effective than envisioned. There is sometimes lack of ownership by the Member States, an issue that should perhaps be tackled by the SAARC Secretariat. In any case, participation by Member States needs to be improved.

9.6 SAARC Framework Agreement on Energy Cooperation -Electricity (FAECE)

According to some, the signing of the FAECE has been a significant achievement for the SEC. This agreement allows for unrestricted cross-border trade, commercial negotiations of PPAs, non-discriminatory open access, private sector trading and participation in power exchanges. However, a lot is still required to be done in terms of materializing the opportunities that have been extended due to this historical milestone. Challenges pertaining to furthering the objectives of FAECE may be surmounted through Regional as well as international institutional partnership/networking. Such partnerships may be established with technical institutions, think tanks as well as civil society. A team of young professionals from the Region may also be formed so as to encourage great energy cooperation across the Region, leading to smooth implementation of the FAECE objectives. It is also suggested that the SEC should undertake programme activities focused on the implementation of FAECE so as to move further towards SAARC Energy Ring.

9.7 Elimination of Energy Poverty

The SEC has made commendable, though less in terms of quantum, efforts towards the elimination of energy poverty. These efforts have been recognized and appreciated by the community at large, steps such as Grameen Shakti project for the distribution of solar lamps. However, it is felt that this has not been given the due attention that this deserves. It is, therefore, suggested that the SEC needs to focus more on green and sustainable resources of energy to enhance the energy across the Region.

9.8 Process Maps for Critical Processes of SEC

The development of process maps is envisioned to be a very helpful tool for SEC like any other business organization. This tool standardizes the internal functions to a greater degree of compliance with formalized procedures and ensures that the staff has a reference benchmark to refer to while carrying out their activities.

Therefore, it is recommended that the SEC create process maps, especially for its complex processes that require several decisions at different levels during each process. This will help SEC in assessing gaps and issues with their current working procedures and align these procedures to ensure not only better compliance but more efficiency throughout their processes. A guide for SEC personnel should be created that will further help in developing and refining process mapping. A few sample process maps have been added as Chart 8.1 – 8.4 and may be referred to.

9.9 Migration to a Paperless SEC Office System

Given the focus on sustainable development by the SEC, the conversion of SEC into a paperless office environment is highly recommended. This is also in line with the trends around the globe where the shift to paperless offices is being made. This initiative would bring several advantages including:

- a. Reduction in waste and increased environmental sustainability
- b. Enhanced savings in terms of invaluable time as well as printing costs, etc.
- c. Enhances productivity of the SEC team as the storage, organization and retrieval of paper-based documents takes significantly more time than digital copies
- d. Improved security of the documents by having them stored on digital servers and enhanced safety in case of possible disasters

The paperless office strategy would also link-up strongly with the proposed content-management system to boost productivity across the SEC. It is suggested that SEC develop and start implementing this strategy over the next 6-months to ensure a smooth yet timely transition.

9.10 Programme/Portfolio Level Management Professional

As detailed earlier in Section 8, it is suggested that the SEC needs to have a Programme/Portfolio Level Management Professional. This position may correspond to Deputy Director (Programmes) as per existing organogram. This professional will serve as a focal resource point for different programme functions including:

- a. Coordinating the process for designing of annual activity programme (action plan)

b. Programme monitoring and evaluation

9.11 Internal Progress Review

Progress review on programme activities is a very important internal activity for SEC. In order to formalize it and to achieve the targets in a timely manner, the Team proposes a template for documenting, tracking and expediting the progress, with respect to programme activities, by SEC professionals. Proposed template for this is available as Annexure - 11.

9.12 Restructuring of the Evaluation Process of the SEC

After careful analysis of the prevailing evaluation process for hiring short-term experts for outsourcing programme activities, the Study team proposes a few changes to this process. One of these changes includes establishment of an evaluation committee besides some additions proposed to the already existing evaluation criteria. Details of these changes can be viewed in Section 8.

9.13 Revisiting the SEC Vision, Mission, Scope and Goals

In order to change gear for realizing its ultimate goal of establishing SAARC Energy Ring, the SEC needs to modify and enhance its vision, mission, scope and goals to bring them at par with the external changes faced by the Region. The vision needs to be expressed by scaling it down into targets for contributing to the realization of SAARC Energy Ring within a certain time frame. The Study includes proposals for revised vision, mission, scope and broad goals available in Section 10, Strategic Plan 2017-21.

9.14 Tackling the Quorum Constraint

The current quorum for the SEC workshops/seminars is minimum six Member States. It has been felt that due to stringent quorum requirements, man hours of the SEC professionals are being wasted i.e. during the current year at least three out of six workshops were cancelled/rolled over due to lack of quorum and that too happened just two/three days before the event date. There are two major disadvantages that the professionals are busy till two/three days before the event and secondly in the event of cancellation, nominated delegates are deprived of participation in the knowledge sharing activities. The situation justifies appropriate modification in the quorum requirements. Keeping it minimum six Member States, for any workshop/seminar, however, up to two Member States may be allowed to join through video conferencing.

9.15 Networking and Liaison

In view of the immense potential of the SEC's contribution and the limited capacity in terms of professional and financial resources, the Team proposes a comprehensive and target-oriented networking with other regional institutions and International Financial Institutions (IFIs) like Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC), ASEAN Centre for Energy, South Asia Sub-Regional Economic Cooperation (SASEC), World Bank, Asian Development Bank (ADB), United States Agency for International Development (USAID), GiZ, etc. Such synergy among the regional and international organizations (having similar objectives with respect to energy sector) will manage sharing of financial resources besides sharing experience and expertise within the Region.

10. SEC Strategic Plan (2017-2021)

The importance and sensitivity of energy sector has enhanced dramatically during the last decade or so. Worldwide utilities, decision makers and planners are pondering on identifying the most economical and sustainable energy resources besides focusing on demand side management. Under this situation and in view of the impact assessment of SEC's interventions done by the Study Team, SEC's Strategic Plan for the term 2017-21 has been developed.

10.1 Summary

While SEC's contribution until now is acknowledged across the Region as very effective, the proposed Strategic Plan 2017-21 foresees a further and continuous development of SEC as a Centre of Excellence in the Region, for all matters and interventions related to the energy sector. Consequently, for its functioning over the next half a decade, the SEC needs to i) redefine its thematic areas; ii) review approach and strategies; iii) take into account its strengths, weaknesses, opportunities and threats. The overall approach for the next Strategic Plan is to broaden the scope and impact of programme activities in the changed and continuously changing scenario on the energy horizon of the Region.

10.2 Introduction

The Strategic Plan 2017-21 includes introduction of KPIs for keeping a track on the SEC's performance through programme activities, SWOT Analysis to provide new dimensions to its future Action Plans, alignments of its thematic area, etc. The overall objective of this plan is to gear up for an early realization of SAARC Energy Ring by synergizing the resources and achievements of the Member States in the most efficient and timely manner.

10.3 Energy Sector Analysis

During the last decade or so, the world has witnessed quite a few important changes relating to the energy sector having great impact on the life of an ordinary person as well as on the policies of the governments. A few of such changes, happened in the recent past, are as follows:

- a. Drastic decline in oil prices (90-100 \$, 2008 to 35\$, December 2015);
- b. Improved, efficient technology for coal power generation;
- c. India aggressively strengthening its energy mix with renewable energy (India targets 1,75,000 MW green power by 2022);
- d. Pakistan has decided to prioritize coal and gas for power generation to enhance the base load capacity;
- e. Key result of '2015 United Nations Climate Change Conference, COP 21', held in Paris in November-December 2015, was an agreement to set a goal of limiting global warming to less than 2 degrees Celsius (°C) compared to pre-industrial levels;
- f. Declining prices of renewable energy technologies;
- g. Energy security has become vital during the last decade since SEC started functioning;
- h. Bi-lateral interconnections are in operation in South Asia (India-BD, India-Nepal, India-Bhutan, CASA 1000-in progress); and
- i. Most of the Member States are now well aware of the cost of energy not served

In view of the changes in world/Regional outlook, SEC is also required to redraw its roadmap for achieving its overall goal with respect to SAARC Energy Ring.

10.4 SWOT Analysis

SWOT analysis is a tool that identifies the strengths, weaknesses, opportunities and threats of an organization. Specifically, SWOT is a basic, straightforward model that assesses what an organization can and cannot do as well as its potential opportunities and threats. The method of SWOT analysis is to take the information from an environmental analysis and separate it into internal (strengths and weaknesses) and external issues (opportunities and threats). Once this is completed, SWOT analysis determines what may assist the firm in accomplishing its objectives, and what obstacles must be overcome or minimized to achieve desired results [8].

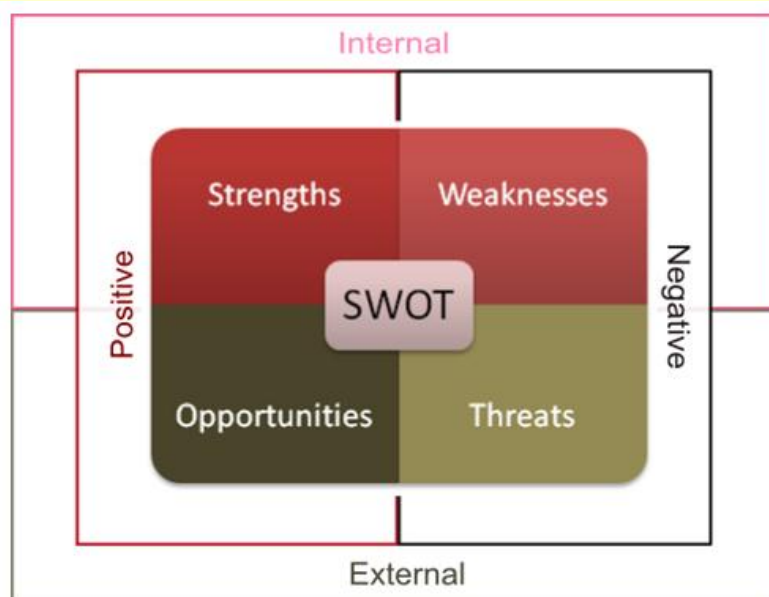


Figure 10.1: Scope and Dimensions of SWOT Analysis

The SWOT analysis is considered an extremely useful tool for understanding and decision-making under different situations in business. It provides a good framework for reviewing strategy, position and direction of a company or business proposition, or any idea. A SWOT analysis can be carried out for a product, place, industry or person. Identification of SWOTs is important since it helps to inform later steps in planning to achieve the overall objective.

The Team performed SWOT Analysis for SEC jointly with the Programme Coordinator-SEC and would like to recommend SEC to use this tool frequently for assessing a specific situation and for undertaking appropriate strategies. Pursuant to the best practices, Figure 10.2 reflects the result of SEC SWOT Analysis performed by the Team. SEC should redo its SWOT analysis by organizing brainstorming sessions. Each of the items in the four sections i.e. Strengths, Weaknesses, Opportunities and Threats should be discussed and debated thoroughly before finalizing the analysis. Engagement of the whole team in this process would ensure realistic and valuable output besides building the team's own capacity.



Figure 10.2: Outcome of SEC SWOT Analysis

10.5 Key Performance Indicators

The Team would like to refer to the following five KPIs identified and utilized for the purpose of the Study:

- Relevance
- Quality and Effectiveness
- Coherence
- Sustainability
- Participation

SEC may utilize these KPIs for its performance/impact assessment with respect to achieving its overall objectives. Besides programme dimension, SEC may design another set of KPIs for its administrative/institutional functions.

10.6 Vision, Mission, Scope and Goals

During the next five years or so, SEC is required to be more aggressive, proactive and open with respect to design, implementation and converting success stories into opportunities. For this SEC needs to transform its approach and enhance its scope of activities.

Vision: The SEC is envisioned as a catalyst for sustained economic growth and development of South Asian region by initiating, coordinating and facilitating regional as well as joint and collective activities on energy while managing a resource pool of professionals from the Member States.

Mission Statement: The SEC will build, grow and sustain as a regional Centre of Excellence on energy to develop and maintain a knowledge base for catering to the intellectual needs of governments, energy sector institutions, academia and professionals.

Slogan: Learn, share, improve and grow together.

Scope: SEC should enhance its scope of activities by incorporating the cross-cutting areas not targeted so far and by undertaking implementation of projects for delivering tangible output. For this purpose, two new thematic areas including the Programme to “Induct and Sustain the Increase of Renewable Energy in the National Energy Mix (PISRE), and the Programme to “Encourage and Support Creativity/Innovation the Energy Sector” are being proposed in addition to the existing five thematic areas.

Goals: The Team has envisioned the following broad goals for SEC to achieve during the term 2017-21:

- a. Strengthen South Asia’s capacity to collectively address global and regional energy issues;
- b. Facilitate energy trade within the SAARC region, through the establishment of a regional electricity grid and gas pipelines and relevant power and gas exchange;
- c. Grooming an Energy-Efficient South Asia;
- d. Contribute proactively for on-grid and off-grid induction of renewable energy in the Region through best practices, smart solutions and synergy among the Regional professionals;
- e. Deliver as regional Centre of excellence on energy by developing and sharing a regional knowledge bank on energy;
- f. Promote private sector investments and participation in energy activities in the Region; and
- g. Promote creativity/innovation especially among the younger professionals/managers of the Region for out of the box approaches to offset the gap between energy demand and supply.

10.7 Target layer

Professionals, experts and practitioners involved in the energy sector indeed are the direct target group of SEC. However, to achieve its objectives, SEC should also closely engage with the political leadership, opinion makers specially media, faculty and students, civil society specially youth and women groups.

10.8 Strengthening and Sustaining the Best Professional Team

This involves stringent and professional hiring criteria (interview panel may be enhanced: regional experts can be engaged using Skype/video conferencing); a mechanism for continuous on-the-job-grooming; remuneration packages and benefits competitive to the corporate energy sector; and a clear development ladder to attract and challenge the proactive professionals.

10.9 Enhanced Set of Thematic Areas

Since its creation, SEC has been conducting its activities under ambit of the five thematic areas. In view of the revolutionary changes in the global energy sector especially technological advancements, acceptance/expectations of out of the box/innovative solutions, cyber applications, clean energy replacing the conventional energy resources, etc. it is high time that SEC reshape its programme horizon and redefine its fundamental thematic areas. Keeping in view the achievements made by the SEC during the last eight years or so and the developments mentioned earlier along with recent global trends mentioned in Section 10.2, the Team would like to propose the following enhanced set of SEC thematic areas:

- a. Programme on “Energy Trade between SAARC Countries” (PENT);
- b. Programme on “Integrated Assessments of Energy, Transport and Environment” (PETREN);
- c. Programme to “Minimize Oil Imports (PROMO) through Improvements in Energy Efficiency and Fuel Substitution”;
- d. Programme to “Successfully Implement Technology Transfer” (POSIT);
- e. Programme on “Rural Electricity for Poverty Alleviation” (PREPA);
- f. Programme to “Induct and Sustain the Increase of Renewable Energy in the National Energy Mix” (PISRE); and
- g. Programme to “Encourage and Support Creativity/Innovation the Energy Sector” (PECES)

However, any changes to the existing thematic areas such as merging or addition should be finalized by the SEC through a participatory approach. For this purpose, SEC may organize a brainstorming workshop/webinar to take all the stakeholders on board for forming a consensus on a final set of thematic areas.

10.10 Potential Strategies

Utilizing the Information Technologies

SEC needs to utilize the immense opportunities offered by information technology to maximize its reach at virtually no cost/least effort. For this purpose, various options may be utilized including internet blogs such as Regional Energy Connectivity and Trading, Induction of RE in the National/Regional Grid, Smart Grid, and Sharing of Success Stories by Member States, etc. Similarly SEC should establish its proactive presence at Facebook to be in 24/7 contact with its stakeholders. This would, of course, require a strong communication section at SEC for effective social media handling. Further the power of webinars for short seminars and training should be utilized to the best possible extent. For this purpose, SEC may make it a regular practice to hire webinar space for whole of the year with unlimited number of webinar/trainings options. Finally, distance learning initiatives undertaken by SEC needs to be enhanced and sustained by introducing more short term certificate courses on different dimensions of energy sector.

Broadening the Resource Base - Networking, Collaboration and Liaison

A broader vision, upbeat mission and realigned goals would require a broader resource base for the SEC which would perhaps not be possible under the current arrangements. However, the objective may be realized through collaborative arrangements with regional and international financial institutions such as Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC), ASEAN Centre for Energy, South Asia Sub-Regional Economic Cooperation (SASEC), The World Bank, Asian Development Bank

(ADB), Giz, USAID South Asia Regional Initiative/Electricity Interconnection (USAID/EI). Such networking would add further value to the SEC's impact since it would synergize the professional expertise as well as the financial resources.

Organizational Excellence

With respect to transforming into a sustainable, regional Centre of Excellence, SEC needs to focus on the institutional reforms. For this purpose, the Study has proposed various measures *inter-alia* acquisition of a higher status for SEC similar to an accredited institute, application of process maps, content management software, internal progress review, etc.; SEC should implement the proposed tools and review their effectiveness on periodical basis for sustained improvement.

New Look to the Action Plan

Addition of certain type of programme activities such as South Asian Energy Summit, South-Asian Universities Forum for Energy would induce diversity to the SEC Action Plan thus contributing positively towards its impact.

List of SEC Programme Activities (2008 - 15)**2015**

1. Feasibility Study for Setting Up SAARC Regional / Sub-regional LNG Terminals
2. SAARC Energy Data Bank 2002 -12
3. Study on Harmonizing Transmission Grid Codes of SAARC Member States to Combat Regulatory Challenges for Intra-region Power Trading / Interconnections
4. SAARC Dissemination Workshop on Study for Designing Management and Monitoring Framework for Regulatory Compliance by Power Transmission Utilities in the SAARC Region
5. Comparative Study for the Prevailing Tariff of Renewable Energy in Member States and, Assessing and Recommending Options such as Net-metering, Banking and Wheeling
6. Impact Assessment of SEC's Initiatives and the Way Forward
7. Study to Assess Renewable Energy Development in South Asia; Achievements and the Way Forward in the Perspective of Policies and Investment Opportunities
8. Study on Optimum Power Generation Mix for a Sustainable Power Sector in South Asia
9. Study on Energy Efficiency in Transport Sector in SAARC Member States
10. SAARC Workshop on Energy Based Livelihoods Contributing to Economic Empowerment of the Marginalized Sectors and Women in the SAARC Region
11. Promotion of SAARC Chullahs (Improved Cooking Stoves-ICS) for their Commercialization / Marketing / Scaling up in the SAARC Member States
12. SAARC Training Workshop on Experience Sharing on Coal Bed Methane, Underground Coal Gasification
13. SAARC Perspective Workshop on the Past, Present and Future of High Voltage DC (HVDC) Power Transmission
14. Study Visit of SEC Professionals to India
15. SAARC Technical Training Course for Power System Planners and Analysts Through Distance Learning

2014

1. Comparative Study on Rural Electrification Policies in SAARC Member States
2. Study on Designing Management and Monitoring Framework for Regulatory Compliance by the Power Transmission Utilities in the SAARC Region
3. Study for Development of a Potential Regional Hydro Power Plant in South Asia
4. SAARC Energy Data Bank
5. SAARC Workshop on Harmonizing Regulations and Policies for Cross Border Power Trade, Risk Sharing and Financial Settlement Issues
6. Study for Assessment of Energy Efficiency Potential through Energy Audit on Power Transmission and Distribution Grid Stations (Pakistan)
7. Webinar on Concept, Establishment and Operation of a Power Exchange for Regional Power Trading.

8. SAARC Dissemination Workshop on SEC Study on Co-generation Opportunities in Sugar and Paper Industries in SAARC Member States
9. SAARC Training Workshop Power System Studies for Synchronization of Multiple Systems

2013

1. Pre-feasibility study for setting up SAARC Regional/Sub-regional Coal Based Power Plant
2. Study on Pricing Mechanism of Electricity in SAARC Member States
3. SAARC Energy Data Bank
4. SAARC Workshop on Experience Sharing of Construction, Operation and Maintenance of LNG Facilities
5. SAARC Dissemination Workshop on Review of Electricity Laws and Regulatory Frameworks of Member States
6. SAARC Seminar on Role of Private Sector in Regional Power Trade
7. Field Trials of SAARC Chullahs (ICS)
8. SAARC Workshop on Household Energy Efficiency and Conservation with Women Participation
9. SAARC Dissemination Workshop on Energy Conservation Potential of Brick Production in Selected SAARC
10. SAARC Training Workshop for Energy Audit and Efficiency in the Power Sector
11. Study on Cogeneration Opportunities in Sugar and Paper Industries in SAARC Member States
12. Participation of SEC Professionals in Conferences, Seminars and Study Visits to Energy related Institutions in Asia
13. Comparative Study on Rural Electrification Policies in SAARC Member States

2012

1. Study on Pricing Mechanism for Oil and Gas (including LNG and LPG) in SAARC Member States
2. Study on Evaluating Energy Conservation Potential of Brick Production in Bangladesh, India, Nepal and Pakistan by Sharing Best Practices in SAARC Member States
3. SAARC Workshop on Women and Energy
4. SAARC Workshop on Renewable Energy Policy, Regulation and Grid Connectivity
5. Attendance of Conferences, Seminars and Visits to R&D Institutions in Asia
6. SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power
7. SAARC Workshop on Tight Gas and Shale Gas Exploration in South Asia
8. SAARC Workshop on Experience Sharing of Bio Gas, Solar Home System and Micro-Hydro Power Projects
9. SAARC Energy Data Bank

2011

1. Study on Review of Existing Documents for the Selection of Regional Hydro Power Plants in Bhutan and Nepal
2. SAARC Workshop on Cross-border Electricity Interconnection
3. SEC-UNESCAP Joint Workshop on Strengthening Institutional Capacity to Support Energy Efficiency in South Asia
4. Training Workshop on Energy Audit
5. Development, Designing and Fabrication of Improved Cooking Stoves (ICS) Workable Model(s) for Cooking with Biomass for Rural Population in SAARC Region

2010

1. A Study on Geothermal Resources of SAARC Countries
2. A Case Study on Indian Wind Power Programme for Technology Transfer and Sharing Best Practices
3. SAARC Training Workshop on Seismic Survey-data Acquisition, Processing and Interpretation in cooperation with OGDCL
4. SAARC Seminar on Solar Energy
5. *Study on Improved Cooking Stoves in South Asia*

2009

1. Implementation of SAARC Road Map for Energy Efficiency and Energy Conversation
2. Preparation of Position Paper on Gas Hydrates Resource Potential of South Asia
3. Training Workshop on Energy Audit
4. Workshop on Harmonization of Appliances Standards and Labelling Programme
5. Workshop on Rural Electrification in Cooperation with Grameen Shakti for Wider Replication in Other Member States

2008

1. Dissemination Seminar on findings of Study on Critical factors in determining Success of Renewable Energy Projects in South Asia
2. Publication of Proceedings of SAARC Training Workshop on Biofuels
3. Study visit of 2-member Delegation of SEC to Energy Institutions of Afghanistan, Bhutan and India

Template for Programme Activity Concept Paper

PRG-71/2015/PROMO	SAARC Study on Impact Assessment of SEC's Initiative and the Way Forward
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Background:

The Heads of State or Government at the Thirteenth SAARC Summit, held at Dhaka on 13 November 2005, agreed to the recommendation of the SAARC Energy Ministers to establish the SAARC Energy Centre (SEC) in Islamabad. The primary objective for establishment of the SAARC Energy Centre was to have a regional institution of excellence for the initiation, coordination and facilitation of SAARC programmes in energy. Conceived and approved goals of the Centre are as follows:

- Strengthen South Asia's capacity to collectively address global and regional energy issues;
- Facilitate energy trade within the SAARC region, for example through the establishment of a regional electricity grid and natural gas pipelines;
- Promote more efficient use of energy within the SAARC region;
- Enhance cooperation in the use of new and renewable energy sources in the region, thereby contributing towards more sustainable development in the SAARC Member States.
- Serve as a focal point for providing reliable energy data for the individual Member States and the South Asian region;
- Enhance SAARC expertise in energy development and management;
- Promote private sector investment and participation in energy activities in the region.
- Undertake programmes to achieve the goals mentioned above.

2. The Centre started its functioning in the year 2007. During these eight years or so, SEC has carried out numerous programme activities which include special projects, research studies, dissemination and capacity building initiatives. These programme activities are aimed at contributing towards implementation of the declarations of SAARC Summits, decisions and recommendations of SAARC Energy Ministers Meetings, SAARC Working Group on Energy and South Asia Energy Dialogue, and follow up actions of previous programme activities. The programmes are spread over the following five thematic areas of Strategic and Operational Plan of the SEC:

- a. Programme on 'Energy Trade between the SAARC Countries' (PENT);
- b. Programme on 'Integrated Assessments of Energy, Transport, and Environment' (PETREN);
- c. Programme to 'Minimize Oil Imports (PROMO) through Improvements in Energy Efficiency and Fuel Substitution';
- d. Programme to 'Successfully Implement Technology Transfer'(POSIT); and
- e. Programme on 'Rural Electricity for Poverty Alleviation' (PREPA).

Introduction:

3. While developing the first strategic and operational plan (2008-13) for the Centre, there was a consensus among the stakeholders that SEC should be an organization that undertakes high-quality analyses on important energy issues facing the region, rather than just be a clearing house for information and a convener of conferences and workshops. This view was also implicit in the statement by the Energy Ministers of the SAARC Member States that SEC be a 'Centre of Excellence'.

4. It is considered that a period of over six years of performance is a reasonable timeframe on the part of SEC to make its impact with respect to influencing the regional policy makers, International Funding Institutions (IFIs) and various other entities working in the same domain in South Asia. Keeping in view this understanding and the expectations by the SAARC leaders, the Governing Board of SEC in its 9th Meeting held on 11-12 September 2014 advised to assess the impacts of the activities of the SEC and specifically desired the following to be pursued:

- Review of SEC's initiatives since its inception
- Access the impacts of the initiatives
- Propose the way forward for the future activities of SEC in line with the findings of the assessment.

Objectives:

5. Through this short term research Study, SEC envisages to achieve the following objectives:

- Assess the impact of SEC's interventions for defining the strategic roadmap with an improved vision and the emerging criticality in terms of regional energy security and sustainability
- Critically assess the contribution by SAARC Energy Centre in materializing the vision given by SAARC leaders' vision pertaining to SAARC Energy Ring
- Establishing SEC's Knowledge Resource Bank comprising of an up to date SEC activities and relevant data/information archive (Concept Papers; Study Reports; Reports of Workshops, Seminars, Pilot/Special Projects; Reports of SAARC Meetings including of SAARC Summit, Working Group, Expert Group, Governing Board Meetings; reports on interaction with the partner/networking organizations, etc.) to be maintained in the soft version and to be accessible to the SEC's professionals and other registered regional professionals through internet
- Review the SEC's prevailing methodology i.e. practices, standards and procedures for execution of its action plan activities including Studies, Workshops, Seminars, Pilot/Special Projects, as well as networking with relevant regional and international entities.
- Develop SEC's 5-year strategic plan based on the lessons learnt through networking, research and knowledge sharing activities conducted during the last eight years

Methodology:

6. SEC may engage short term regional expert(s) having extensive experience of similar or relevant interventions preferably in the energy sector, to be identified and selected by SEC as per requirements of the Study through SEC's standard practice. The Study report will be reviewed by SEC professionals and suitable expert(s) from the Region. SEC will select reviewer(s) from South Asia having relevant knowledge and experience. Final report

will be printed and circulated to relevant organizations in South Asia and it will be uploaded to SEC website for wider dissemination.

Terms of Reference:

7. The Study will cover, but not limited to, the following building blocks:

- Collect and organize, i) Strategic and Operational Plan (2008-13), Vision, Mission Statements and Objectives; ii) SEC's programme implementation procedures/practices and criteria including activity methodology, selection of external experts/resource persons; and iii) the data and information including presentations, reports, etc. pertaining to SEC's interventions (up to the year 2014) undertaken under SEC's thematic areas - the whole dataset defined in the Section 'Objectives' as SEC activities and relevant data/information archive.
- Suggest a system/software of Content Management with strong searching options for organizing the SEC activities and relevant data/information archive to be accessible online as well as internet and to be acknowledged as SEC's Knowledge Resource Bank
- Seek feedback from all stakeholders including but not limited to past delegates from the Member States, experts and resource persons, short terms consultants and professionals who have worked/are working with SEC, current officials of the Member States related to SEC and its activities. Interact with the stakeholders through customized feedback/survey formats and webinars (cyber meetings and seminars) aiming at a comprehensive and meaningful output of the Study through adopting participatory approach. The questionnaire for the purpose of survey would include the opinion of the respondents regarding the influence on the policy, developments, systems and projects of the Region and/or individual Member State due to the SEC's interventions.; provide input to the list of SEC stakeholders to be maintained by SEC and uploaded on the SEC's web
- Review the collected SEC activities and relevant data/information archive with respect to relevance, quality, acceptance and coherence with the vision and objectives of SEC
- Assess the quality, rating (as per customized criteria to be proposed by the Expert(s) and vetted by SEC) and impact of SEC's interventions (2007-14) keeping in view of the expectations of SAARC leaders - the very rationale for establishing the SEC
- Review and, if required, modify/enhance the SEC's prevailing programme methodology i.e. practices, standards and procedures for designing and execution of its action plan as well as networking activities. This will include the basis for proposing an intervention, theme and format of concept papers, selection of resource persons for the workshops and seminars, selection of short term experts for short term research studies as well as selection of professionals from the Member States.
- Develop, seek comments and suggestions from the SEC, improve and finalize the SEC's Strategic Roadmap (2017–2021) based on the lessons learnt through networking, research and knowledge sharing activities conducted during the last eight years with a critical review of SEC's current vision and the consistently emerging criticality in terms of Regional energy security and sustainability

Based on the above mentioned analysis and opinion established thereof, comment on the contribution by the Centre in materializing the SAARC leaders' vision on SAARC Energy Ring; suggest the way forward to further enhance the assessed contribution level

Within a separate section/chapter of the Study report, thoroughly discuss and suggest the remedial strategies for the issues and hurdles, if any, hindering the potential, conceived and expected achievements of SEC with respect to performance and impact in the energy dimension of the Region.

Terms and Conditions

8. Following terms and conditions would apply for the Regional Expert(s):
- a. As an accomplishment of the assignment, the Expert(s) will prepare and submit the Draft as well as Final Report to the Director, SAARC Energy Centre as per given time schedule taking into account the above described background, objectives and the terms of reference;
 - b. The Expert(s) will report to the Director, SAARC Energy Centre and will remain in close contact with SEC Programme Coordinator deputed for this particular Study;
 - c. SEC will make the available data accessible to the Expert(s) for conducting the Study such as First Strategic Plan, activity concept papers, reports, publications, expert selection criteria, job descriptions, etc. Further to this, data/information collection for the purpose of this study would be the sole responsibility of the Expert(s).
 - d. The *Expert(s)* shall submit the Deliverables given in the Section 7 to the *SEC* within the specified timeframe for approval of Director, *SEC*. The draft report will be sent to the external Reviewer(s) selected by *SEC* for peer review and comments. The *Expert(s)* will incorporate the comments by *SEC* as well as by the Reviewer(s) and submit final report. The *SEC* shall examine and evaluate the submitted report and determine whether the same is reasonably satisfactory and notify the *Expert(s)* of its determination as the approval of the report.
 - e. The Expert(s) will not be required to travel to SAARC Member States to conduct the Study; he/she will complete the Study while working at his/her current location; and E-mail would be the preferred mode of communication with SEC for the purpose of this Study. However, the Expert(s) will be the focal person for seeking input by the regional as well as international stakeholders through arranging webinar(s) as highlighted in the Methodology/TOR. The Expert(s) will also be required to organize a webinar, for sharing the Study outcome and for seeking/responding the comments and suggestions by the SEC team led by Director, SEC.

Deliverable:

9. A draft Study Report conforming to the background, objectives and TORs as described above as per following details:

Draft Report

- 3 copies of the draft Study report will be submitted by the Expert(s).
- One or more webinars for managing input by the stakeholders
- A presentation, through a webinar, will be organized by the Short Term Expert(s) to share and discuss the contents.

Final Report

- The Report would be finalized based on the inputs received during webinar(s), and from the Reviewers and the SEC Professionals. Three copies of the Final Report would be submitted along with the soft copy.

Time Schedule:

10. First Draft of the Report will be submitted within four months after signing the Contract by the Short Term Expert(s) and the SAARC Energy Centre.

Honorarium/Remuneration:

11. SEC will pay modest honorarium/remuneration to the Expert(s) and external reviewer(s) after completion and acceptance of the Study report by SEC.

Time Schedule:

12. The conceived plan for this research Study would be implemented according to the following timeline:

Activity↓	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Identification & Selection of Expert(s)/Reviewer(s)												
Contract Signing												
Report Preparation												
Submission of Draft Report												
Peer Review												
In-house Review, Completion & Printing												

Advertisement for Hiring of Short-term Expert

The SAARC Energy Centre is looking for an experienced and qualified Short term expert for providing consultancy services for the following SAARC study:

“Impact Assessment of Initiatives by SAARC Energy Centre and the Way Forward”

If you have got working experience in the relevant field, please submit a covering letter and CV (using the SEC format available at SEC's website www.saarcenergy.org) to salis@saarcenergy.org and info@saarcenergy.org by mentioning the subject of the study, not later than 13th March 2015. Please indicate your ability and availability to undertake the specific study. The SAARC Energy Centre will pay modest lump sum remuneration after completion and acceptance of the study by the Centre. The selected expert will not be required to travel to SAARC Member States or to SAARC Energy Centre to conduct the study; the task will be completed while working at his/her current location. Only short-listed applicants will be contacted.

Template for Curriculum Vitae/Resume

Position/Opportunity/Task Applied For			
1. Personal Data			
Name			
Nationality			
Present Address			
Mailing address			
Permanent Address			
Cell and Landline Telephone			
Fax			
Email			
2. Availability			
Short-term tasks	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Long-term tasks Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Languages			
<i>(Proficiency in speaking, reading & writing of each language by excellent, good, fair or poor)</i>			
Languages	Speaking	Reading	Writing
4. Key Qualifications			
<i>(Outline of experience in terms of projects, research work and reports most pertinent to the opportunity available with SEC)</i>			
Brief Description of Initiative	Organization/Entity	Period	Location

5. Academic Credentials

(Summarized college/university & other specialized education)

Dates Attended	Name of Academic Institution	Degree/Certificate

6. Experience Record

(All positions held since graduation)

Period	Employer	Position	Major Responsibilities

7. Publications, If any

8. References			
Name and Country	Position	Email	Telephone

Selection of Short-term Experts for Conducting Studies

Technical Evaluation Criteria

Title of Study	
Expert's Name	
Evaluation Date	

#	Evaluation Aspect	Criteria	Marks	
			Maximum	Obtained
A.	General Qualification		30	
1.	Academic Qualifications	Bachelor of Engineering or Master of Science (75%) Post Graduate Diploma in the relevant field/MBA/ Master of Science in Engineering (10%) PhD in the relevant field (10%) Membership of recognized Professional Institution (5%)	20	
2.	Working Experience	15 or more projects/20 years' work experience – power and energy sector (100%)	10	
B.	Study Related Experience (5 or more relevant projects (100%))		45	
C.	Local/Foreign/Regional Experience		25	
1.	Local Experience (Projects in expert's home country)	5 or more projects (100%)	10	
2.	Foreign Experience (International projects)	2 or more projects (100%)	5	
3.	Regional Experience (Projects in South Asia)	2 or more projects (100%)	10	
Total Marks:			100	

*Minimum technical score to qualify-- 70 points.

Financial Evaluation

Expert	Tech. Evaluation Points	x70% (A)	Price Proposal	Price Points*	x30% (B)	Total Score (A+B)
E1						
E2						
En						

* (Lowest Price x 100)/Individual Price Proposal.

Sample Notice to Proceed

Director

No.
71/2015/PROMO

Ref: SEC/Contract-PRG-

Dated: July 8, 2015

Ms. Aameena Sohail
138, Street No. 4, Block A,
PWD Society, Lohi Bhai,
Islamabad
Pakistan

Subject: **SAARC Study Impact Assessment of SEC's Initiatives and the Way Forward**

Notice to Proceed

This serves as notice to proceed with the Services as per SEC Contract # PRG-71/2015/PROMO and the Terms of Reference annexed to the said Contract signed by you and the SAARC Energy Centre. The services shall be accomplished on completion of the assignment as provided under Section 7 of the Service Agreement.

Yours sincerely,

(Muhammad Naeem Malik)

Attachment: Contract PRG-71/2015/PROMO

Feedback Survey Form**SAARC Study Impact Assessment of SEC's Initiatives and the Way Forward**

Name (Optional)	
Title at current organization (Optional)	
Name of organization (optional)	
SAARC Member State	

Affiliation with SEC							
Member State/Institution							
Afghanistan	Bangladesh	Bhutan	India	Nepal	Maldives	Pakistan	Sri Lanka
Other (The World Bank, USAID, GIZ, etc.)							
Capacity							
Delegate	Expert	Resource Person	Knowledge Partner/Local Coordinator			Professional	
Other, please specify)							
How familiar are you with the SEC's mission?							
Extremely familiar	Very Familiar	Moderately familiar	Slightly familiar	Not at all familiar			
Involvement in SEC Activities and Interventions							
How long were you affiliated with SAARC? (Days/Months/Years)							
Title of the Event/Task/Assignment along with Place and the Year							
What prompted you to participate in the SEC's Programme Activities?							
Official nomination							
Impressed with the concept of regional Centre of Excellence and took initiative to join							
Looking for self-improvement and/or exposure							
Employment opportunity							
Other, please specify:							

How would you rate your experience of affiliation with SEC in terms of gaining/sharing knowledge through the SEC programme activities?						
Extremely high	High	Moderate	Low	Very little to none		
To what extent did involvement in SEC's activities have improved your knowledge/ skills/ability to contribute to work?						
Extremely high	High	Moderate	Low	Very little to none		
How much of an impact do you feel SEC's activities have had?						
A great deal	A lot	Moderate	A little	Not at all		
How would you rate the overall quality of SEC's activities (scale of 10-1)?						
How would you rate the overall success of SEC's activities (scale of 10-1)?						
If your rating for Part 3-h was 10-6, what was the defining factor that led to SEC's success?						
Concept	Planning	Team Competence and Commitment	Selection of Resource Persons			
Other, please specify:						
If your rating for Part 3-h was 5-1, what was the defining factor that led to SEC's failure?						
Concept	Planning	Team Competence and Commitment	Selection of Resource Persons			
If you are mandated to improve SEC's performance, what area would you like to change?						
Concept	Planning	Team Competence and Commitment	Selection of Resource Persons			
In your opinion, what is/are the most useful aspect(s) of the SEC initiatives?						
Useful knowledge sharing on energy	Diversity of intervention areas	Exposure to best practices in industry	Networking/ Linkages	Capacity building of regional professionals		
Other, please specify:						
How would you rate your overall experience with SEC?						
Extremely satisfied	Quite satisfied	Somewhat satisfied	Neither satisfied not dissatisfied	Somewhat dissatisfied	Quite dissatisfied	Extremely dissatisfied
To what extent, SEC's activities have contributed to your knowledge/skills/ ability to contribute to work?						
A great deal of impact	A lot of impact	Moderate impact	A little impact	Not any impact at all		
How keen are you to be affiliated with SEC through its interventions (Scale (10-1)?						
Please specify which type of interventions would you like the SEC to conduct in the future? (maximum two options)						
Research Studies	Seminars	Workshops	Webinars	Special Projects		

Other, please specify:			
Would you like to be contacted in case we need to speak with you in detail regarding any of the above answers?			
Yes	No	May be (please specify):	
Would you like to remain anonymous?		Yes	No

Questions for Individual Interviews

SAARC Study Impact Assessment of Initiatives by SAARC Energy Centre (SEC) and the Way Forward

1. Do you find the strategic vision of SEC comprehensive enough? Does it need any revision/ improvement, if yes, in what dimension/area?
2. Do you think that SEC has been performing according to its vision and objectives? If not, what are the main reasons, in your opinion?
3. Has SEC been able to maintain a balance in its programme activities with respect to its thematic areas?

#	Code	Thematic Area
a	PENT	Programme on Energy Trade between the SAARC Countries
b	PETREN	Programme on Integrated Assessments of Energy, Transport, and Environment
c	PROMO	Programme to minimize oil imports through improvements in energy efficiency and fuel substitution
d	POSIT	Programme to successfully implement technology transfer
e	PREPA	Programme on rural electricity for poverty alleviation

4. What in your views are the hurdles in the execution of plans, activities, projects, if any, and how these can be overcome?
5. How do you see the competence level of SEC professional team and how i) could it be improved? ii) could the engagement of quality professionals be ensured?
6. Among all regional centres under SAARC, how do you see the performance of SEC, in terms of impact/effectiveness while functioning as regional energy Centre of Excellence?
7. Are you satisfied with the quality of research/ activities initiated by SEC?
8. What are the major achievements, and shortcomings, of SEC, in your opinion?
9. What has been the level/extent of cooperation among the Member States in organizing the SEC programme activities such as workshops, seminars, studies and special projects, etc.?
10. What would you like to suggest for improving the SEC's overall effectiveness?
11. What are your recommendations, if any, for the future work/contribution/interventions of SEC regarding South Asia's energy related problems?

SAARC Study Impact Assessment of Initiatives by SAARC Energy Centre (SEC) and the Way Forward

List of Interviewees

#	Name	Affiliation
1.	Mr. Nazrul Islam	Transport Specialist, Asian Development Bank, Bangladesh
2.	Mr. Rajiv Ratna Panda	Sr. Project Manager USAID SARI/EI, India
3.	Dr. Muhammad Pervez	Former Director General, HDIP, Pakistan
4.	Dr. P.N. Fernando	Former Manager for East Region's infrastructure, energy and financial sectors, ADB, Sri Lanka
5.	Mr. V.K. Kharbanda	Project Director, USAID SARI/EI, India
6.	Mr. Anjum Ahmed	Senior Energy Specialist, World Bank, Pakistan
7.	Mr. Rajesh Kumar Mediratta	Director, Indian Energy Exchange, India
8.	Dr. H.M. Wijekoon	Chief Engineer Ceylon Electricity Board, Sri Lanka
9.	Mr. Atta ur Rehman	Director General, Central Power Purchasing Agency, Pakistan

SAARC Energy Centre, Islamabad

Delegate Feedback and Comments**SAARC Training Workshop 'Experience Sharing on Coal Bed Methane, Underground Coal Gasification and Coal Extraction Methodology'**

26-27 November 2015, New Delhi, India

Please check only one box in each row

#	Statement	Excellent	Very Good	Adequate	Satisfactory	Poor
A. Resource Material and Presentations						
1.	Contents (Subject coverage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Quality of the knowledge shared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Quantum of the presented information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Presentations theme, sequence and flow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Delegates' interaction opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Resource Persons/Experts						
1.	Communication skills and expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Approach and flow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Response to the queries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Overall Environment of the Workshop						
1.	Conducive for learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Punctuality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	SEC's coordination/support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Other arrangements including sitting, audio visual system, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Refreshment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Suggestions for Further Improvements						
1.	Resource material and presentations					
2.	Resource persons/experts					
3.	Overall environment					
4.	What other related topics should be included in the SEC Action Plan?	Not necessarily required				
5.	Suggestions for improving overall knowledge sharing process					

Delegate's name:	
Position & Organization:	
Email contact:	

Further suggestions are always welcome at info@saarcenergy.org

Internal Progress Review: Bi-Weekly Report

No: 03/2016 Dated: 15 February 2016

No.	Start Date	Title	Thematic Area	Responsibility	Progress (%)			Target Completion Date
					Scheduled	Actual	Cumulative	
1	January 2016	Study on the potential for Energy Storage Technologies in Electricity Sector of SAARC Member States	PETERN	RF (EE)	3	1	1	August 2016
Status: (i), (ii), (iii), and (iv) Changes since last Report: Note:								
2	January 2016	Dissemination workshop on the “Study for Development of a Potential Regional Hydro Power Plant in South Asia” (2-day), Nepal	PENT	RF (ETE)	4	4	4	July 2016
Status: (i), (ii), (iii), and (iv) Changes since last Report: Note:								
3	January 2016	Training workshop on “Identification, comparison And Scenario based application of Power Demand / Load Forecasting Tools (2-day) 19-20 Jul	POSIT	PL (ET)	4	2	2	July 2016
Status: (i), (ii), and (iii) Changes since last Report: Note:								
4	January 2016	Dissemination video conference on “Opportunities and Challenges for implementation of SAARC Framework Agreement on Energy Cooperation - Electricity (FAECE) for Energy Cooperation Agreement (Electricity)” 2-4 Aug	PENT	PL (ET)	Just Started	0	0	August 2016

No.	Start Date	Title	Thematic Area	Responsibility	Progress (%)			Target Completion Date
					Scheduled	Actual	Cumulative	
Status: (i), (ii), (iii), and (iv)								
Changes since last Report:								
Note:								
5	January 2016	SAARC Energy Conservation Award - SECA (01 Day)	PROMO	CS	2	2	2	June 2016
Status: (i), and (ii)								
Changes since last Report:								
Note:								
6	January 2016	Implementation of SEC Impact Study Report with respect to SEC Strategic Plan 2017-21, content management system, internal procedures and tools	PROMO	PL (ET)				September 2016
Status: (i), (ii), (iii), and (iv)								
Changes since last Report:								
Note:								
No.	Start Date	Title	Responsibility	Progress (%)			Target Completion Date	
				Scheduled	Actual	Cumulative		
7	-	Miscellaneous Tasks (Activities assigned other than FY Action Plan)	As required.	-	-	-	As required.	
Status: (i), (ii), (iii), and (iv)								
Changes since last Report:								
Note:								

Salis Usman

Programme Leader (Energy Trade)

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