Request for Proposal (RFP)

“Energy Efficiency Improvements in Power Generation and Distribution Sectors of SAARC Countries”

February, 2020

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Introduction

Energy efficiency improvement is a fast way to bring in more energy for meeting the growing demands. However, the power generation and distribution sectors of SAARC Member States are adversely affected by energy inefficiency and reliability issues. There exists ample room for SAARC countries to improve and reap the rewards both in economy, and in form of environmental conservation. Investigating the opportunities of efficiency improvements in SAARC countries’ power sectors and identifying the ways to tap those opportunities are the needs of the hour. Therefore, SAARC Energy Center (SEC) intends to explore the potential energy efficiency improvements in SAARC region in the form of a research study.

The research study shall be outsourced to a short-term Expert(s) / party selected and hired by SEC. The Expert(s) / party shall be required to thoroughly explore / analyze / address the research topic and associated issues faced at various levels in the generation and distribution sectors by the relevant stakeholders and players in each SAARC Member State. The Expert(s) / party shall conduct the study in line with given TORs and shall build his / her research while considering the minimum contents proposed by the SEC for the study.

Objective of Study

The overall objective of this research study is to serve as a guideline for energy efficiency improvement in the power generation and distribution sectors of SAARC countries. The study should be a precise analysis of the power sector of each Member State with the aim to educate / prepare all stakeholders of Generation and Distribution Sectors to cope with the challenges related to improvement of energy efficiency.

Terms of Reference (TORs) of Study

The major aspects of this research study are as under:

a) The research study is expected to cover the areas suggested in Proposed Minimum Contents (given at ANNEXURE – IV) keeping in view the objectives defined earlier in this document.

b) The overall approach of the research should be to provide feasible solutions to improve energy efficiency in power generation and distribution sectors of SAARC member states.

c) In the study, an in-depth and precise research shall be preferred over generic or broad natured appraisal. Similarly, the quantified results shall be preferred over the qualitative assessments / estimations.

d) The research report should steer the Generation Companies and Distribution Utilities towards higher efficiency; rather than a generic and broad-based high-level appraisal.
e) The research is expected to provide an in-depth analysis on the energy inefficiencies and deliver tailored/suitable solutions for SAARC countries based international standards and global best practices.

f) The style of the study report should be factual; and suitable for professionals / experts in the field as well as technical audience.

g) As far as possible primary sources should be preferred over secondary sources. All sources should be properly documented. Un-sourced information or secondary sources like newspapers should not be used in the report. Authentic scholarly internet sources can be used for this research.

h) No interviews, or human-stories or case-studies should be made part of research report. However, conclusions / results drawn from these can be used.

i) The pictures / exhibits taken from other sources for incorporation in this study report should be of good quality and of high resolution. All graphs and images should be clearly visible and data sources shall be indicated.

j) The viable and proven solutions / examples / best practices of countries or regions, which have similar or near-similar conditions as of South Asian countries can be used in this research. Likewise, the comparison (if any) should be drawn on similar lines.

k) Country-wise and overall conclusion of the study shall be presented. Regional level assessments or recommendations for South Asia are not desirable.

**General Terms & Conditions**

Following terms and conditions will apply for the purpose of this study:

a) The selected and hired Expert(s) / party will enter into a service agreement with SAARC Energy Centre to conduct the study.

b) The Expert(s) / party will report to the Director SAARC Energy Centre and will remain in close contact with SEC Programme Coordinator deputed for this particular study.

c) E-mail/ Skype / Video Link will be the preferred mode of communication between Expert(s) / party and SEC.

d) To facilitate the Expert(s) / party in the conduct of the study, SEC will give free access to all relevant data available with it. This shall include all SEC publications, reports / data / information held in SEC library and data bank. Other than this, collection of all additional data/information, for the purpose of this study, will be the sole responsibility of the Expert(s) / party.
e) Expert(s) / party will design and structure the study by taking into account, but not limited to the TORs and Proposed Minimum Contents of the study, as suggested by SEC. Expert(s) / party is/are strongly encouraged to add or improve the contents of study in consultation with SEC.

f) Expert(s) / party will submit the broad Table of Contents along with any further additional information about the study within three weeks of the signing of the service agreement.

g) The expert(s) / party will regularly submit the draft of the study (electronic copy) conducted / completed till date, on monthly basis to SEC for mutual coordination and timely feedback from the Program Coordinator.

**Duration of the Assignment**

a) The expert(s) / party will submit first draft report of the study (completed in all respects) within four months of the signing of the service agreement. SEC shall review the draft and notify the expert(s) / party of its evaluation. Any weaknesses / shortcomings / improvements pointed out by SEC shall be addressed by the expert(s) / party in the draft study report accordingly.

b) SEC will send the improved draft study report to the selected reviewer(s) for peer-review and comments. The Expert(s) / party will incorporate the comments / suggestions of the reviewer to finalize the study report.

**Deliverables**

After finalization of the study, the expert(s) / party will submit the following:

a) Soft copy of Final Study Report (editable version) with appropriate formatting and composing for A4 size paper.

b) A comprehensive PowerPoint presentation covering the important features and the outcome of the study.

**Payment Terms**

SEC will pay modest honorarium (all-inclusive and after deduction of tax/duty) to the Expert(s) / party after completion, peer review and acceptance of the final study report by the Centre. The Centre will not be able to make the payment in case of late submission of the deliverables mentioned here.

**Hiring Process of Expert(s)/ Party**

All interested Expert(s) / party are encouraged to submit their technical & financial proposals to undertake this study. The Expert(s) / party may be an individual or individuals teamed up to strengthen their expertise for addressing technical, commercial, financial aspect of the study. Hiring process will be as following:

a) Submission of technical & financial Proposals by Expert(s) / party by the set deadline.

b) Screening of technical & financial proposals by SEC.
c) Technical evaluation of screened proposals by Evaluation Committee for shortlisting of suitable Expert(s) / party.

d) Shortlisted Expert(s) / party shall be interviewed on Skype / Video Link.

e) Financial evaluation of the proposals of shortlisted Experts(s) / party.

f) Final selection will be based on combined score of technical evaluation (70% weightage) and financial proposal (30% weightage).

g) The successful Expert(s) / party will be intimated and offered to enter into an agreement with SEC to undertake the study. In case he / she declines, next highest Expert(s) / party will be offered to proceed with service agreement.

**Format of Proposal**

All proposals should be accompanied by a covering letter indicating ability and availability to undertake the study within the stipulated timeframe. The proposal shall comprise of two separate parts: Technical Proposal and Financial Proposal. The Technical Proposal should have following major components:

   a) Methodology and Work Plan to conduct the study (guidelines given in Annexure – I)

   b) Curriculum Vitae (CVs) of the Expert(s) / party as per template in Annexure – II. Scanned copies of testimonials / degrees / certificates should be attached with the CV.

   c) Relevant experience for conducting the above study.

Financial proposal should stipulate a lump-sum amount in US Dollars to undertake the assignment as per format at Annexure – III.
ANNEXURE – I

Methodology and Work Plan for Performing the Assignment

The outline of Technical Proposal (maximum three pages, including charts and diagrams if any) inter-alia covering the following:

a) **Methodology**: You are expected to briefly specify your understanding of the objectives and TORs of the study/assignment. Please describe your methodology for achieving the objectives, the TORs and meeting the expected outcomes within time frame specified for the study. Also, please highlight potential difficulties in carrying out the study and how you will address these.

b) **Work Plan**: The work plan should transform your methodology into clearly distinguished activities along with their timelines. Please specify the nature and duration of each activity, phasing and inter-relations, milestones and delivery dates of the report (*take 1st April 2020 as reference date to start*).
## ANNEXURE – II

### Standard Template for Curriculum Vitae

**Assignment/Study/Task Applied for**

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### Proficiency in English Language

(Proficiency in speaking, reading & writing by *Excellent, Good, Fair or Poor*)

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<th>Speaking</th>
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<th>Writing</th>
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### References

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<th>Professional Courses, Trainings etc. (professional courses / short courses (other than academic courses) attended)</th>
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<td>Course Title / Description</td>
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**Work / Job Experience** *(All positions held since graduation)*

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<th>Major Responsibilities</th>
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<th>Experience Specifically Related to This Assignment / Study / Task</th>
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<tr>
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<td><em>(Related projects, research work and other (local/ SAARC region/ international))</em></td>
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<tr>
<td>Brief Description of Project / Research / Field Work Undertaken</td>
<td>Organization and Country / Location</td>
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### FINANCIAL PROPOSAL

<table>
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<tr>
<th>Description of Assignment</th>
<th>Total Amount (USD)</th>
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<tr>
<td>“Energy Efficiency Improvements in Power Generation and Distribution Sectors of SAARC Countries”</td>
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It is certified that the given RFP has been thoroughly read, understood and agreed upon. The Expert / party undertakes to complete the assignment within stipulated time at the total cost (inclusive of all taxes/deduction) quoted above.

**Expert / Team Lead: ___________________________

Signature with date: ___________________________


ANNEXURE – IV

Proposed Minimum Contents

For

Energy Efficiency Improvements in Power Generation and Distribution Sectors of SAARC Countries

(These are the proposed minimum contents for the study that should be improved to make the study comprehensive.)

- Foreword
- Acknowledgement
- Table of Contents
- List of Abbreviations
- List of Tables
- List of Figures
- Executive Summary
- Scope of the Study
- Limitations of the Study

1. Introduction

1.1 Objectives and Scope of the study

1.2 Requirement of Energy Efficient Power Systems for SAARC Countries

(This section shall cater the following aspects of the subject study:)

- Key factors for improving efficiency of Generation and Distribution Systems
- Potential for Energy Efficiency Improvements in Generation and Distribution Systems for each of the SAARC member states.
- Usefulness/Primary Advantages of the energy efficiency improvements

1.3 Methodology of the study

(The author(s) shall outline the approach adopted to execute and fulfil the study objectives. Process to identify potential energy efficiency related problems in Generation and Distribution Systems shall be described separately for technical and non-technical aspects including defective policies; administrative issues; social and environmental challenges etc. The author(s) shall also shed some light on the expected accuracy of the methodology followed.)
1.3.1 Detailed Methodology

1.3.1.1 Approach 1

1.3.1.1.1 Sub-Method/Approach

1.3.1.2 Approach 2

1.3.1.2.1 Sub-Method/Approach

1.3.2 Expected Accuracy of the Proposed Methodology

2. Energy Efficiency Analysis of Power Systems of SAARC Countries

(This chapter shall provide a detailed analysis of power systems with sole focus on improving energy efficiency for each member country of SAARC. A brief overview of current condition of the power system in each country shall be provided followed by in-depth analysis of efficiency problems and their root causes. Only existing system data shall be used for carrying out the analysis, no parts of the system planned in future – future generation sources, distribution interconnections etc. – should be considered while carrying out the analysis.)

2.1 For Each SAARC Member Country (In Alphabetical Order)

2.1.1 Generation Sector

(This section will provide a brief overview of the generation sector in each of the SAARC member states. Author(s) shall propose and justify the criteria to select the minimum rating of a generation source to be used for analysis in this study. The selection criteria shall vary for each country. All selected generation sources shall be analysed thoroughly with respect to their type and capacity; reported running efficiency; types of losses, their time-variant behavior and their root causes; impact (commercial, environmental etc.) of the losses; solutions to overcome the reported losses based on international standards and best practices; key requirements to implement the suggested solutions. A summary in form of a Source Type vs. Loss Type matrix shall be included as well.)

2.1.1.1 Loss Type 1

2.1.1.1.1 Loss Sub-Type

2.1.1.2 Loss Type 2

2.1.1.2.1 Loss Sub-Type

2.1.2 Distribution Network

(This section will introduce to the structure of distribution network; number of distribution utilities and size of their operation; the reported losses in each utility: types, time-variant behavior and their root causes; feasible solutions to minimize the identified losses – While recommending solutions, reference shall be made to global best practices. Lessons learnt from a country with conditions similar to SAARC member states and having developed an efficient distribution system may be presented as well; key requirements to implement the suggested solutions. Please note that analysis for transmission system is not required.)

2.1.2.1 Loss Type 1

2.1.2.1.1 Loss Sub-Type

2.1.2.2 Loss Type 2

2.1.2.2.1 Loss Sub-Type
2.1.3 Non-Technical Inefficiencies

This section should consider all possible non-technical aspects which can affect efficient operation of Generation and Distribution Systems e.g. e.g. policy gaps, market competitiveness, theft, governance issues, financial conditions, administrative weaknesses, social and environmental constraints etc. Once all issues have been identified, an in-depth analysis of their impact and reforms required to address all issues shall be provided.

2.1.3.1 Policy Issues

2.1.3.1.1 Issue Sub-Type

2.1.3.2 Administrative/Governance Issue

2.1.3.2.1 Issue Sub-Type

2.1.3.3 Financial Constraints

2.1.3.3.1 Issue Sub-Type

2.1.3.4 Social and Environmental Issues

2.1.3.4.1 Issue Sub-Type

2.1.4 Estimation of Financial Impact of Losses

(This section shall estimate the cost incurred due to all the losses/inefficiencies identified in the previous section. The cost estimation shall be projected into future till year 2030. The financial impact of low efficiency power generation and distribution shall be accounted for considering all stakeholders. All direct or indirect financial impact of low efficiency on local industry, domestic users, society and environment shall be quantified.)

3. Challenges, Benefits and Requirements for Implementation of Energy Efficiency Improvements

(This chapter shall define country-wise expected challenges and barriers to implement energy efficiency improvements; expected financial, demand side, social and environmental benefits arising due to increased efficiency of generation and distribution systems; pre-requisites for successful implementation of Energy Efficiency Improvements; sustainability of suggested improvements and expected measures to be taken by each member state in long term future as their generation and distribution systems grow further with time.)

3.1 For Each SAARC Member Country (In Alphabetical Order)

3.1.1 Expected Challenges and Barriers

3.1.2 Financial Benefits

3.1.3 Consumer Side Benefits

3.1.4 Social and Environmental Benefits

3.1.5 Pre-requisites for Implementation

3.1.6 Sustainability of Recommended Improvements

3.1.7 Future Challenges
4. **Recommended Energy Efficiency Improvements**
   (This chapter shall provide a macro level summary based on the detailed analysis carried out in chapter 2 and chapter 3:
   • A summary of best practices followed globally for energy efficiency improvements in generation and distribution sectors.
   • A brief comparison to a country – having similar attributes/parameters as those of SAARC countries – with efficient generation and distribution sectors.
   • Efforts in hand by each member country to correct the efficiency related problems in its respective generation and distribution sectors.
   • Country-wise specific technical and technical and non-technical suggestions for improving energy efficiency in generation and distribution sectors. Implications of suggested reforms shall also be documented with each recommendation.
   • Estimated cost for implementation of suggested improvements.)

4.1 Best Practices Followed Globally

4.2 Comparison with a Similar Country

4.3 Efforts in hand in each of SAARC Member States

4.4 For Each SAARC Member Country (In Alphabetical Order)
   4.4.1 Technical Improvements
   4.4.2 Non-Technical Reforms
   4.4.3 Cost of Implementing the Recommended Improvements

5. **Conclusion**
   (Conclusion for each member state as well as the whole study shall be presented in this section.)

6. **Bibliography**
   (Please follow APA Fifth Edition method)