ENERGY EFFICIENT STREET LIGHTING IN THANE MUNICIPAL CORPORATION

Invitation for Expression of Interest & Request for Proposal

I. Background:

Street lighting is an important service provided by Urban Local Bodies. Issues of poor maintenance, lack of optimization and technological up-gradation not only affect the quality of services, but also put an extra burden on the energy demand of local government services and subsequent costs.

The European Commission is funding the project Urban LEDS – Low Emissions Development in Emerging Economy Countries, being implemented by ICLEI South Asia and UN-HABITAT in eight Indian cities, including Thane Municipal Corporation.

Amongst other activities under this project, ICLEI South Asia will provide lead services to assist in structuring and developing an ESCO (Energy Service Company) project for 10000 street lights to improve the illumination level of the city, ensure large scale energy efficiency in municipal street lighting, modernization/augmentation and ensure operation and maintenance of street lighting services in Thane city, with the sole aim of reducing the energy burden of the service.

ICLEI South Asia seeks the services of a technical consultant who will support ICLEI South Asia in assessing the techno-economic feasibility of the ESCO project, developing tender documentation and subsequently in managing a competitive bid process for selecting an ESCO for implementing the LED based street lighting project in Thane.

II. Scope of Work:

The consultant is required to perform the following set of activities as part of the engagement with ICLSI South Asia. The consultant is also required to work in close coordination with the city officials and ICLEI South Asia team.

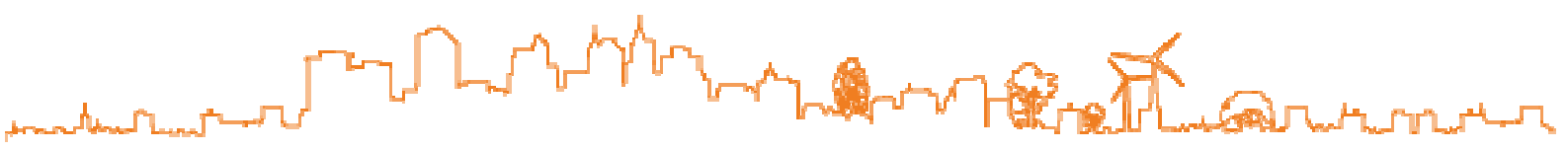
1. **Identification of replaceable street light fixture locations (approximately 10000) and establish a baseline through sampling. Areas to be surveyed are to be identified in consultation with ICLEI South Asia:**

   i. This step involves mapping the fixture locations which may be replaced – based on existing pole infrastructure and road types/classifications. Identify locations where retrofitting is feasible, approximately 10000 street lights, based on surveys.

   ii. For a representative sample of these 10000 poles (to be finalized in consultation with ICLEI South Asia), conducting inventory of the key features for the municipal lighting fixtures such as fixture types, wattages, nos., spacing, fixture housing type, control systems, system efficiency, energy demand, their current operating efficiency / efficacy, related characteristics like Color Rendering Index (CRI), existing lumen levels and other technical specifications. A realistic estimation of current energy bills attributable to street lighting is to be done. The field assessments would also encompass noting metering arrangements, checking for non-functioning meters and fixtures, conducting lighting measurements with light meters.

   iii. Evaluate the effect of non-available hours of street lighting, average time of replacement / repair of the fault etc. on the baselines

   iv. **This baseline situation is to be used to determine the potential costs and saving as a result of LED replacement in the entire city**



2. **Preparation of ESCO tender documents through assessments of appropriate new technology options, finance, risks, sensitivity etc. (through an investment grade audit for agreed upon representative sample from among the identified streetlights for replacement) to determine viability of replacing approximately 10,000 street lights in areas identified by the consultant.**

i. Evaluation of various issues, including different system networks, potential for energy savings and exact number of light points for inclusion in the ESCO project.

v. Develop technical specifications for LED fixtures. Based on the recommended standards, bring out the gaps (if any) and bring out their effects on the baselines.

ii. Development of elaborate capital and O&M cost estimates and estimates for energy savings, emission reductions, potential for carbon credits etc. for the different options.

iii. Develop methodology for verification of performance of installed LED fixtures.

iv. Development of performance standards/elaborate objective mechanisms for estimating/assessing savings achieved by the energy service company (ESCO).

v. Analysing alternate ECSO models from technical aspects and suggest the most appropriate model

vi. Drafting the ESCO model and preparing relevant tender documents

vii. Drafting of the technical due diligence report and assisting the TMC and ICLEI team in compilation of tender documents and managing the bid process including vetting of potential bidders technical and financial proposals for selection of an ESCO.

viii. Develop methodology for third party measurement and verification of actual savings for a period of one year after implementation.

III. Deliverables and Outputs:

1. Identification and Baseline Assessment of street lights to be replaced in Thane (based on indicative sampling of identified replaceable light fixtures)
2. Tender documents for ESCO for street lighting for approximately 10,000 street lights
3. Methodology for monitoring implementation of ESCO
4. Methodology for third party verification of ESCO based street lighting

IV. Qualifications of Proposing Firm:

The following qualifications are mandatory:
Experience in preparing technical feasibility reports, designing, cost estimation and technical specifications for street lighting systems/ energy efficiency lighting projects

1. Experience in tendering including preparation of tender documents, scheduling planning for implementation of a urban infrastructure/ street lighting systems/ energy efficiency lighting projects

The following qualification is desirable:

1. Experience in carrying out technical due diligence on designing and implementation of energy efficient urban street lighting system in a developing country, preferably in last 3 years.

V. SuggestedContents of the Proposal:

1. Details of the firm
2. Qualifications of the Firm
3. Proof of similar previous work
4. CVs of key personnel
5. Details of relevant equipment available with the firm
6. Proposed methodology to undertake the assignment & corresponding timelines
7. Financial proposal

VI. General Conditions

1. The project is being proposed under the Urban LEDS project, which is being implemented in Thane Municipal Corporation. ICLEI South Asia is responsible for managing the project and for ensuring timely payments, through project funding. Thane Municipal Corporation has no liability.
2. ICLEI reserves the right to verify any information provided, or to request additional information after EOI packages are received.
3. All data and information received from ICLEI SA for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written notice of ICLEI SA.
4. Correspondence related to this EOI should be addressed in writing only

All interested firms are requested to send in their proposals no later than 18th of April, 2014, either through post/courier or E-mail or Fax

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