

Request for Proposal (RfP) for Assessment of Street Lighting National Program (SLNP): Lessons learned and Future Prospects

1. KEY DATES AND DETAILS

Event	Dates
Closing Time for Submission of Proposals	16/04/2026
Pre-bid Queries from Bidders	<p>06/04/2026 at 17:30 hrs IST.</p> <p>Please send your queries to the following email ID only: procurement_gef6@iiec.org</p> <p>Pre-bid queries received after this deadline shall not be considered.</p>
Method to Submit Proposal	<p>Proposals must be submitted to:</p> <p>Procurement Team International Institute for Energy Conservation (IIEC) 944 Mitrtown Office Tower, 27 Floor, Suite no. S27089, Samyan Mitrtown, Rama IV Road, Wangmai, Pathumwan, Bangkok 10330, Thailand. <i>E-mail:</i> procurement_gef6@iiec.org</p> <p>The Bidder shall submit only an electronic version (in PDF format) of the proposal strictly in separate attachments as mentioned below –</p> <p>Subject Line: Proposal For “Assessment of Street Lighting National Program (SLNP): Lessons learned and Future Prospects”</p> <p>File 1: Technical Proposal (not more than 25 pages) including expertise of firm/organization, approach, methodology, implementation/work plan and team members’ CVs. The CV of each team member should not exceed 3 pages. However, CVs do not count as a part of 25 pages limit.</p> <p>File 2: Financial Proposal (not more than 2 pages)</p> <p>File 3: Copy of Work Orders showcasing relevant experience. (not more than 15 pages)</p> <p>File 4: Certificate of Registration (legal status), Financial audited statement of last 3 years (not more than 15 pages)</p>

(The proposal document should be single-spaced, 12-point Times New Roman font in Microsoft Word, at least one-inch margins)

Proposals with conditional offers or variables, submitted in any manner other than as detailed in this section or submitted after the deadline, shall be deemed invalid and may be excluded from consideration.

2. BACKGROUND

According to the Bureau of Energy Efficiency (BEE), India's energy efficiency market is estimated to be worth INR 150,000 Crores. Both government policies and efforts by multilateral and bilateral organizations to conserve energy across a wide range of sectors have supported the emergence of various innovative programs for implementing energy efficiency and demand-side management in India. In 2009, India has also seen the emergence of Energy Efficiency Services Limited (EESL), a Super ESCO. EESL is a Joint Venture of Power Grid Corporation of India Limited (PGCIL), NTPC Limited (NTPC), Power Finance Corporation Limited (PFC) and Rural Electrification Corporation Limited (REC) to facilitate the implementation of energy efficiency projects. EESL is also leading the market-related actions of the NMEEE.

Under the **Global Environment Facility (GEF)-6 cycle**, the **United Nations Environment Programme (UNEP)** is the lead implementing agency for managing the project '**Creating and Sustaining Markets for Energy Efficiency**'. In India, the project is currently executed by **Energy Efficiency Services Limited (EESL)**, as the 'Executing agency' and the **International Institute for Energy Conservation (IIEC)** as the 'Co-Executing agency' for this project.

The Street Lighting National Programme (SLNP), initiated in the year 2015, marked a significant endeavour to transform India's street lighting infrastructure. This program is implemented by Energy Efficiency Services Limited (EESL), which involves the replacement of traditional streetlights with LED lights at no upfront cost to municipalities. EESL bears the initial investment, and municipalities repay overtime through the savings generated from reduced energy and maintenance costs. However, as cities evolve toward smarter and more sustainable infrastructure, street lighting systems must adapt to meet modern demands for energy efficiency, real-time control, and enhanced public safety. Traditional lighting systems, often managed in bulk, lack the flexibility and responsiveness required in today's urban environments.

Therefore, a need to review the existing business approach including offered technology solutions is required. Furthermore, new business approach such as Lighting-as-a-Service (L-a-a-S) for advanced street lighting solutions, enabling business opportunities for L-a-a-S players, monitoring, and advanced automation & control solution providers and Light Management System (LMS) needs to be explored. The outcome of this assignment will further help EESL in scaling up SLNP program catering to the needs of the stakeholders and users according the current market dynamics.

3. ABOUT INTERNATIONAL INSTITUTE FOR ENERGY CONSERVATION (IIEC)

The International Institute for Energy Conservation (IIEC) was established in the USA in 1984 as a non-governmental, not-for-profit organization and has regional offices in India, the Philippines, and Thailand.

IIEC's mission is to accelerate the global adoption of energy efficiency and renewable energy policies, technologies, and practices to enable economic and environmentally sustainable development. IIEC pursues this mission in developing countries and countries in transition through fieldwork undertaken by its regional offices. For the last four decades, IIEC has been providing solutions to the problems posed by the rapidly increasing energy demand in developing and industrializing countries. IIEC works with governments and the private sector to develop, implement, and evaluate energy efficiency and renewable energy policies, programs, and projects.

4. STUDY OBJECTIVE

Since its inception, the SLNP has achieved remarkable milestones, with over 1.29 crore LED streetlights installed across Urban Local Bodies (ULBs) and Gram Panchayats throughout India. As part of the SLNP, 1576 ULBs have been enrolled, and substantial progress has been made, with work completed in 1060 ULBs. Furthermore, EESL has also extended this program to Gram Panchayats, aiming to enhance lighting efficiency in remote regions.

The envisaged objectives of study are as follows:

- Review of existing Street Lighting National Program (SLNP) and its current business model.
- Development of new business and financial models, options for alternative payment security mechanism, market opportunities for Lighting as a service (LaaS) solution.
- Conduct a structured evaluation of new and advanced street lighting technologies, focusing on systems with individual and group lamp-level control and monitoring and other value-added services such as security surveillance etc.
- Assess the performance of selected technologies in terms of energy efficiency, reliability, scalability, and user experience (urban, semi-urban, gram panchayats).
- Generate actionable insights to support EESL in refining its strategy for broader deployment under the Street Lighting National Program.
- Identify best practices and optimize system design based on pilot outcomes and customer (ULBs) feedback.

5. SCOPE OF WORK

The study will be divided into six (6) key tasks as follows:

Task-1: Inception and data collection

- The agency shall support EESL in identifying suitable advanced street lighting technologies, specifically those enabling individual lamp-level control and monitoring.
- The agency shall provide a comprehensive methodology outlining the data collection approach, survey techniques, and analytical frameworks to be employed during the study.
- Upon receiving confirmation from EESL, the agency will finalize the selection of ULBs (max 2 sites in 2 cities) for pilot demonstration of the proposed new and advanced street lighting technology on new business model of LaaS.
- The Inception Report shall include approach, methodology, data collection template, etc.

Task-2: Review of Existing Street Lighting National Program (SLNP)

The agency shall conduct a detailed review of EESL's existing SLNP with the following sub activities:

- The agency shall analyse and present the status of the SLNP, including its operational framework and key milestones achieved.
- The agency shall conduct a critical review of the existing business models of the program alongside the key challenges in existing streetlighting business to EESL, opportunity loss of EESL in diminishing streetlight business and other benefits which likely to be passed on to the stakeholders.
- The agency shall identify the current operational challenges and issues to provide suggestions for enhancement (Technology, Geographical Coverage, clientele, lesson learnt, etc.) in existing Street Lighting National Program.

Task-3: Formalization of Lighting-as-a-Service (LaaS)

The agency shall support EESL in the conceptualization of Lighting-as-a-Service with the following activities:

- Prepare the detailed concept on the formulation of 'Lighting-as-a-Service' and its modalities.
- Develop business and financial models for LaaS with the inclusion of business opportunities for LaaS players, EESL, advanced technology solutions providers, clients (ULBs, PSUs, Campus authorities, etc.). The models shall have cover all form of costing & revenue sheets, assumptions of financial & commercial parameters. Financial models shall have consider transparency and sharing of energy saving opportunities amongst the stakeholders (EESL, LaaS Players, ULBs/ clients) to enable market transformation or advance street lighting solution/ sports lighting, heritage lighting/ area lighting in large campuses The agency shall provide full report on the business model and financial model, excel based detailed model which can be customized in the form of a IT Tool for EESL.
- The agency shall assess options for suitable payment security mechanism & options for securing the payments to LaaS player, EESL and other partners during the implementation phase of LaaS project.
- Prepare guidance document, MOU, definitive agreement templates including scope, roles and responsibility, deliverables, and commercials for Street Lighting solution on LaaS model.

Task-4: Technology assessment of new and advanced street lighting technologies

The agency shall provide a detailed technology assessment report on the possible new and advanced street lighting technologies. The agency shall perform the following activities for the technology assessment task:

- Identification of new and advanced street lighting technologies available at national and international level. Map the technology with respect to standards defined in National Lighting Code (NLC) 2025.
- Market analysis of the identified new and advanced street lighting technologies with respect to the applicability and feasibility in Indian context, business opportunity in different categories of

street lighting solutions and associated other solutions, energy savings potential, typical specifications, challenges in the implementation, replicability, O&M aspects, market readiness, availability of TSPs etc.

- Cost benefit analysis for the identified new and advanced street lighting technologies for EESL/ULB in comparison to existing implemented technologies.
- GHG emissions estimation due to the new and advanced street lighting technologies.
- List of TSPs/ vendors/ OEMs/ Suppliers of identified new and advanced street lighting technologies.
- Prepare a priority matrix of the identified technologies with the highest potential of scaling up to the least potential and efficiency.

Task-5: Support in the pilot demonstration

The objective of this task is to support EESL in the pilot demonstration of new and advanced street lighting technologies in the selected ULBs (max 2 sites in 2 cities) to test the business and financial model in real urban infrastructure. The sub-tasks are as follows:

- Assist in finalizing the pilot site(s) in coordination with EESL and relevant ULBs.
- A preliminary survey shall be initiated across selected ULBs identified by EESL as potential sites for technology demonstration. During the survey, the baseline of the existing technology will be established in identified ULBs (max 2 sites).
- Review and validate the selected street lighting technology for pilot deployment, ensuring alignment with technical, operational, and EESL/ULB requirements.
- Develop detailed technical specifications and performance benchmarks for the pilot demonstration.
- Prepare the technical bid document for hiring SITC (Supply, Installation, Testing & Commissioning) vendor for pilot demonstration. The technical bid document should cover the following aspects, but not limited to:
 - Scope of work and deliverables
 - Technical specifications and compliance requirements
 - Eligibility criteria and evaluation methodology
 - Contract terms, timelines, and payment milestones

Task-6: Facilitation for developing Advanced Universal Dashboard for SLNP

Under this task, the agency shall facilitate EESL for the development of Advanced Universal Dashboard for SLNP. The sub-tasks are as follows:

- Identify tech-enabled organizations capable of developing a universal dashboard for advanced streetlight technologies.
- Prepare the guidance document with the recommendations to upgrade and integrate the existing SLNP dashboard(s) for creating the Advanced Universal Dashboard for SLNP.

- Prepare guidance document, MOU, definitive agreement templates including scope, roles and responsibility, deliverables, and commercials, for the organisation to be selected by EESL for creating the Advanced Universal Dashboard for SLNP.

6. DELIVERABLES & TIMELINES

The shortlisted Organization/Agency is expected to complete the deliverables as per the timelines mentioned below-

Deliverables	Timeline
Inception report with data collection template	Within 1 week of the inception meeting
Submission of report on the review of the existing Street Lighting National Program	Within 4 weeks from the date of award of contract
Business and Financial models (Reports and Excel based Models) for LaaS	Within 8 weeks from the date of award of contract
Technology Assessment report of new and advanced street lighting technologies including technical, financial, O&M, etc.	Within 10 weeks from the date of award of contract
Guidance document, MOU, definitive agreement templates including scope, roles and responsibility, deliverables, and commercials for Street Lighting solution on LaaS model including Advanced Universal Dashboard for SLNP	Within 12 weeks from the date of award of contract
Support in completing the pilot demonstration of new and advanced street lighting technologies in the selected ULBs (max 2 sites in 2 cities).	Within 16 weeks from the date of award of contract

Note: If the selected agency cannot complete the deliverables within given timelines, then the project deadline may either be extended (without additional cost) or short closed. In case of short closing of the contract, only the payment of the completed deliverables shall be paid to the agency.

7. SUBMITTAL & REPORTING

Interested organisations/agencies must provide information indicating that it is qualified to perform the services, along with budgetary quotes, by submitting separate proposals as described above via email to procurement_gef6@iiec.org with the subject as **“Assessment of Street Lighting National Program (SLNP): Lessons learned and Future Prospects”** in the subject line by **16th April 2026 at 17:30 hrs IST.**

Proposals should include the following information.

- Brief background about your organisation.
- Organizational & team’s relevant experience.
- A narrative outlining the vision for the work along with the suggested methodology, work plan, and/or other technical inputs for the assignment.
- Team composition and individual qualifications & experience.
- References of similar projects/studies with contact details (email and telephone).
- Budget information. The Organization/Agency should submit a detailed cost proposal in USD only.

8. SCHEDULE OF PAYMENTS

S. No.	Milestone	Percentage of Total Contract Value (%)
1	Inception report with data collection template	20 % of the contract value
2	Completion of Program review and new Business and Financial models (Reports and Excel based Models) for LaaS Technology Assessment report of new and advanced street lighting technologies including technical, financial, O&M, etc.	30 % of the contract value
3	Guidance document, MOU, definitive agreement templates including scope, roles and responsibility, deliverables, and commercials for Street Lighting solution on LaaS model including Advanced Universal Dashboard for SLNP	30 % of the contract value
4	Support in completing the pilot demonstration of new and advanced street lighting technologies in the selected ULBs (max 2 sites in 2 cities).	20 % of the contract value

9. QUALIFYING REQUIREMENTS

- Have a legal status in India enabling the firm to carry out the assignment.
- Average annual turnover for the last three financial years should be of USD 500,000.
- The organization must have prior experience of at least 2 projects related to street lighting projects in India.
- The agency should have carried out at least 3 projects in technology assessment/ DPR preparation related to energy efficient lighting preferably street lighting systems.
- The agency should have carried out at least two projects related to impact assessment of programs.
- The agency should have experience in developing IT dashboard/ MIS for at least 2 projects.

Note: Bidders shall submit the relevant supporting documents showcasing their qualifications and experience relevant to the qualifying criteria mentioned above. However, IIEC holds the right to seek any additional documents during the evaluation process as deemed necessary.

10. EVALUATION CRITERIA

The evaluation of bids shall be done on Quality Based Selection with **80%** (Eighty percent) weightage to technical score and **20%** (Twenty percent) weightage to financial bid. The following are the qualification criteria for the selection of organization/agency.

- Pre-screening: All applications meeting the minimum eligibility criteria and conformance to the application content requirements will be evaluated by the Evaluation Committee (EC).
- The minimum technical score required to pass is 70%.
- Final Evaluation: The proposals will be evaluated based on the marks obtained as per the criteria provided below against each category by the EC.

Parameters	Marks	Maximum Marks
Quality of Technical Proposal <i>Sub-Criteria:</i> a. Adequacy of the proposed methodology in responding to the Terms of Reference. b. Technical approach and work plan. c. Specific experience of the proposed team members.	25 20 20	65
Specific experience of the Organization/Agency relevant to the assignment	15	15
Bid cost competitiveness	20	20
TOTAL		100

11. TEAM COMPOSITION, EDUCATIONAL & PROFESSIONAL QUALIFICATIONS

S. No	Role	Minimum Number of professionals	Minimum Education Qualification	Minimum Experience Criteria
1	Project Lead	1	Master's degree in engineering /technology/ MBA with Accredited Energy Auditor	Should have 20 years of professional experience with at least 12 years of experience in energy efficient technology assessment, smart and LED street lighting, pilot demonstration, etc.

S. No	Role	Minimum Number of professionals	Minimum Education Qualification	Minimum Experience Criteria
2	Energy Efficient Lighting/ Street Lighting Experts	2	Bachelor of Engineering / Bachelor of Technology (Electrical) or equivalent	Should have 15 years of professional experience with at least 10 years of experience in LED street lighting, smart lighting controls, or energy efficiency projects etc.,
3	Energy Auditor	1	Bachelor of Engineering / Bachelor of Technology (Electrical/ Mechanical) or equivalent	Should be a BEE Certified Energy Auditor with at least 5 years of experience in energy audit; Involved in energy efficient smart and LED street lighting projects.
4	Field Engineers	2	Bachelor of Engineering / Bachelor of Technology (Electrical/ Mechanical) or equivalent	Should have at least 5 years of experience in supervising and monitoring street lighting implementation and have experience in managing field activities.
5	IT Expert	1	Bachelor's degree in Computer Science/Information Technology/ Electronics and Communications	Should have at least 8 years of experience in developing dashboards, command centres and similar works etc.,

The agency shall also demonstrate the availability of backstopping support and availability adequate support staff/resources for supporting the project team in conducting various tasks of the assignment.

12. INSTRUCTIONS FOR BIDDERS

- Bidders are requested to submit the complete proposal as mentioned on Page 1 of this RFP document.
- Files/ Folders greater than 20 MB in size will not be delivered in the above-mentioned email ID resulting in non-submission of the bids.
- The bidders can submit the proposal and documents in a maximum of two separate emails due to the size limitations of email as mentioned above.
- Submission of bids through any open source or links to shared drives such as Google Drive, OneDrive, WeTransfer, Dropbox etc. shall not be entertained and will stand disqualified.
- Project references and the associated documentary evidence should be easily identifiable for ease of evaluation.
- Submission of Financials should indicate the component of local taxes, as applicable.

13. TERMS AND CONDITION

- JV/consortium or any kind of sub-contracting shall not be allowed for this assignment.
- The maximum cumulative liability of the Consultant/ agency entering a contract with the Client shall be limited to the Contract Value.
- IIEC is under no obligation to accept any proposal or part thereof received in response to this study.
- IIEC reserves the right to seek clarification or request any additional documents as deemed necessary. Furthermore, the IIEC reserves the right to modify or cancel the RFP (including extending the deadline for the receipt of proposals) without justification or compensation payable to the bidder.
- It will be at IIEC's discretion that it may accept request for an interim payment based on the situation of the ongoing project.
- IIEC will not reimburse bidders' expenses, including those related to responding to this RFP. In case any additional tasks are required, the consultant should seek prior approval in writing from IIEC.
- Confidentiality: All data and information received from IIEC and partner organizations, provided to the agency for this assignment is to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference (a specific separate confidentiality agreement may be agreed between the Consultancy and IIEC, if needed to provide information more freely). All intellectual property rights arising from the execution of these Terms of Reference are assigned to IIEC. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written authorization of IIEC and its partner organizations.