

# Support for upgradation of India efficiency policy for electric pumps

## Introduction

[CLASP](#) serves at the epicentre of collaborative, ambitious efforts to mitigate climate change and in the global movement for clean energy access, through appliance efficiency. Our mission is to improve the energy and environmental performance of the appliances & equipment we use every day, accelerating our transition to a more sustainable world. We work hand-in-hand with governments, experts, industry, consumers, donor organizations and others to propel policies and markets toward the highest-quality, lowest resource-intensive appliances possible.

CLASP has worked in more than 100 countries since its inception in 1999. CLASP is headquartered in Washington, DC, with teams in Europe, Kenya, India, China, and Indonesia. We are mission-driven and committed to a culture of diversity, transparency, collaboration, and impactful work. See our [Team Page](#) learn more about us.

In India, CLASP works closely with the Bureau of Energy Efficiency and has supported the expansion of its appliance policy framework to cover a wide range of residential, commercial, and industrial energy-using products. This has resulted in reduced greenhouse gas emissions and peak electricity demand, reduced consumer energy costs, and expanded access to high-quality appliances. In partnership with key national stakeholders, we advance policy compliance, education, and outreach initiatives to foster an ecosystem for resource-efficient appliances and equipment.

## Background

The Government of India enacted the Energy Conservation Act 2001 (EC Act) in August 2001 and established BEE, a statutory body under the Ministry of Power, Government of India to implement the EC Act in 2002. The Act identifies S&L as one of the major program areas for improving energy efficiency in the residential, commercial, and industrial sectors. BEE launched the S&L program in May 2006 and currently, it covers 30 product categories of which 10 are under the mandatory phase. BEE initiated the voluntary labelling program for three-phase pumps in 2008 covering electric mono set pumps, submersible pump sets and open well submersible pump sets. In 2015, BEE expanded the scope to single-phase category of pumps inline amendments of relevant test standards of the Bureau of Indian Standards (BIS), and later the energy efficiency levels of pumps were upgraded by 2-star levels to enhance the efficiency of the pumps.

**Monoset Pump** sets are one of the widely used devices for agricultural and other applications for clear, cold, and freshwater purposes. BEE's Monoset pumps labelling program covers for single phase and three categories for a capacity range up to 2.2 kW and 22 kW respectively in accordance with Indian Standards (IS) 9079.

A **submersible pump** is a device that has a hermetically sealed motor close-coupled to the pump body. Submersible pumps are used in various fields like irrigation, drinking and dewatering. BEE's submersible pumps labelling program covers for single phase and three phase categories for a capacity range up to 2.2 kW and 75 kW respectively in accordance with Indian Standards (IS) 8034.

**Open well Submersible pump** is a pump that is completely submerged in water and is sealed in an airtight fashion. These are ideally suitable for where there are wide fluctuations in water

level. BEE's open well submersible pumps labelling program covers for single phase and three categories for a capacity range up to 2.2 kW and 15 kW respectively in accordance with Indian Standards (IS) 14220.

All the three types of pumps covered in the RFP are only AC-powered pumps.

BEE plans to revise the existing labeling program of electrically driven mono set pumps, submersible pump and open well submersible pump in line with the latest version of Indian standards along with the transition from the current voluntary phase to the mandatory phase.

CLASP seeks to hire a consultant/organization to conduct a comprehensive market and technical assessment to revise the existing labeling program for electric pumps transition from voluntary to mandatory phase.

### **Scope of Work to revise the existing labeling program for AC powered electric pumps**

The Consultant will be responsible for successfully executing the following activities and tasks as part of the study. Execution of all activities and tasks must be conducted in close consultation with BEE and CLASP.

#### **Task 1: Comprehensive market assessment**

- 1.1 Assess the size of the national market for electric pumps (number, phases, types, sizes, overall efficiency, and output ratings) including units manufactured and sold, import vs domestic manufacturing, organized vs unorganized share, market segment of major manufacturers, and main distribution channels/supply chain of both finished products and at the component level.
- 1.2 Develop a questionnaire in consultation with CLASP for the collection of data to analyze the current market scenario, energy performance status etc.
- 1.3 Develop a forecast for electric pumps market growth in India. The forecast should be accompanied by an analysis of key drivers of market penetration.
- 1.4 Identify the challenges and barriers that exist to increased market penetration of efficient electric pumps. This may include barriers related to manufacturing, technology, consumer issues (service, price, quality, etc.), and policy implementation.
- 1.5 Assess the market penetration for voluntary labeling program and readiness of market for transition to mandatory phase from 2023 and its impacts on domestic manufacturing. Identify any major challenges in implementation.

#### **Task 2: Review of test procedure**

- 2.1. Identify and analyse latest Indian/ISO/IEC test standard/any other global standards for revision of existing labeling program.
- 2.2 Review and compare international test standards such as ISO/IEC as well as labeling program used by countries and regions such as China, Korea, Japan, EU, US, Australia etc. Analysis must include the comparison of testing conditions, testing methods, calculation methods for efficiencies, energy efficiency parameters etc and provide recommendations for upgradation of existing labelling program as per requirement of Indian context.

2.3. Identify and provide an assessment of existing test facilities in India including their national accreditation status and provide recommendations for addressing the gaps.

2.4 Facilitate product testing, if required, and conduct a detailed analysis of the lab test data to generate performance metrics.

### **Task 3: Revision of Energy Efficiency Metric and Labeling Scheme**

3.1. Conduct a comparison of international labeling programs and energy efficiency metrics.

3.2. Propose a revised energy efficiency metric and the labelling scheme for the existing labelling program of mono set pumps, submersible pump and open well submersible pump. The scheme should be developed in a template of schedule provided by the CLASP and address all the parameters in the respective clauses of the schedule template.

3.3 Road map on the transition from voluntary to mandatory labelling program including the effective date for revision and transition to mandatory program.

### **Task 4: National Impact Assessment and Technical Committee Meetings**

4.1. Based on the final recommendations of labeling thresholds, conduct a national impact assessment of the labeling program. This should be quantified based on annual electricity consumption, projected energy savings and associated cost savings, avoided generation capacity and GHG emission reductions. The impact assessment should be done based on logical assumptions of market transformation for short term (2030) and long term (by 2050).

4.2. Assess the implications of S&L policies on manufacturers, consumers ownerships, and requirements of subsidies / incentives to promote policy adoption, if needed.

4.3. Assist CLASP and BEE in planning and deliberating at the technical committee meetings for electric pumps. Prepare necessary documents (e.g. presentation, meeting agenda and minutes, labeling schedule, and gazette notification) as required.

### **Key milestones and deliverables of the study include:**

- **Submission of final comprehensive market and technical assessment report with key findings and recommendations for three electric pumps**
- **Propose revised energy performance metric for mono set pumps, submersible pump, and open well submersible pump**
- **Draft product schedule using BEE template.**
- **Preparation of necessary material such as communications related articles and news media for CLASP and BEE.**

### **Timeline**

The project is expected to commence in May 2022 and be concluded by December 2022.

### **Evaluation Procedure**

A committee appointed by CLASP will evaluate proposals received from respondents. Selection of qualified companies or organizations will be based upon the following criteria:

- **Technical Evaluation Factors**
- **Cost Evaluation Factors**

All bids will be evaluated and ranked using Quality and Cost Based Selection (QCBS), with 80 percent of the score accorded to the technical proposal, and 20 percent to the financial proposal.

## **Submittal**

### **Interested parties must:**

1. Register as a [CLASP Consulting Partner](#) .
2. Complete the Pre-Qualification Questionnaire

All candidates must [fill out the PQQ](#). The PQQ is a thorough due diligence screening aimed at gathering legal and financial information on prospective partners/vendors. If questions are not applicable, please type “N/A” and go to the next question. While the form can be saved, we recommend completing it in one sitting to avoid potential complications. You will be notified once you submit the PQQ.

Organizations that have already completed the PQQ do not need to complete it again unless the structure of the business has changed. If you are unsure, please email Andrea Testa (atesta@clasp.ngo) to determine next steps.

## **Submit Technical and Financial Proposals**

Interested parties should submit separate technical and financial proposals electronically, in English, via this [form link](#) (preferably in PDF format).

The files should be named as per the following example:

- [CONTRACTOR\_NAME] \_Technical Proposal\_ RFP \_05\_05\_2022\_electric pumps
- [CONTRACTOR\_NAME] \_Financial Proposal\_ RFP\_05\_05\_2022\_electric pumps

The deadline for applications is **May 05, 2022**. Proposals must be submitted via the form link above. Proposals must be submitted online via the CLASP website, filling out all the requested information and attaching both technical and financial proposals. The length of the proposal should not exceed 20 pages.

The technical proposal should include:

- **Detailed approach and methodology for the design, implementation, and management of the project.**
- **Detailed timeline for all project activities, tasks, milestones, and deliverables for the project within the time-frame indicated above.**
- **Background and experience of conducting similar activities, especially on electric pumps.**
- **A summary of qualifications and experience of key personnel that will execute the project.**

CVs and related summaries of experience and qualifications of proposed project team staff should be included in an Annex and should not exceed 10 pages.

The financial proposal (in USD) should include:

- **Detailed budget that includes all direct and indirect cost estimates for executing the project, including a breakdown (in days) of the level of effort and costs associated with each team member that will be engaged in the project.**

All questions may be addressed to Ms. Sumedha Awasthy at sawasthy@clasp.ngo. The last date for submission of questions related to this RFP is **29 April 2022**. We request all inquiries be made by e-mail and not by phone.

*CLASP is an equal opportunity employer that celebrates diversity and are committed to creating an inclusive environment for all employees. CLASP's goal is to be a diverse workforce that is representative, at all job levels, of the citizens we serve. CLASP complies with all federal, state and local employment law in the countries we operate and is committed to providing equal opportunity for all employees and applicants without regard to race, color, religion, national origin, sex, age, marital status, sexual orientation, gender identity or expression, pregnancy, disability, political affiliation, personal appearance, family responsibilities, matriculation, genetic information, military or protected veteran status, credit information or any other characteristic protected under federal, state or local law.*

*Each person is evaluated based on personal skill and merit. CLASP's policy regarding equal employment opportunity applies to all aspects of employment, including recruitment, hiring, job assignments, promotions, working conditions, scheduling, benefits, wage and salary administration, disciplinary action, termination, and social, educational and recreational programs.*