



The Voice of the **Off-Grid Solar Energy** Industry

GOGLA  
Johan Cruijff Boulevard 91  
1101 DM, Amsterdam Zuid-Oost  
The Netherlands  
www.gogla.org

## **Terms of Reference**

### **A study into the solar lantern and solar home system market in India: current state & future outlook**

#### **(with a limited scope study in Bangladesh and Nepal)**

### **About GOGLA**

GOGLA is the global association for the off-grid solar energy industry. We are proud to champion one of the world's most innovative and impactful sectors. Millions of people already benefited from affordable, high-quality, clean off-grid solar products and services. With the right support, our pioneering industry will be able to scale up rapidly to improve the lives of 1 billion people by 2030. To help make this happen, we promote, safeguard, and convene the industry, advocating for enabling policies and increased investment as well as supporting our 200+ members with effective services. To know more, <https://www.gogla.org/about-us>.

### **Background**

As the global community has moved toward achieving SDG7, i.e., "affordable, reliable, sustainable and modern energy for all" by 2030, particularly for Low Income Poor Rural Communities, Household solar systems and lanterns have proved to be an important tool. SHS and lanterns allow households access to energy for lighting and other uses, and replace costly, harmful kerosene lamps and candles. They also enable other applications such as mobile and outdoor lighting – esp. in rural outdoor settings – enhancing security and supporting other activities, while at the same time making a positive contribution to carbon emission reduction efforts.

According to Government of India (GoI) [data](#), India achieved almost 100% grid connectivity for households (HHs), in 2019. However, there still remains a large population in the country that can be classified as living in a weak /unreliable grid area, as per the Efficiency for Access report "Off-and Weak-Grid Solar Appliance Market - India" of June 2020, only [22%](#) of rural households in India have access to reliable service.

As per the bi-annual GOGLA market sales data reports, despite seeing a decline in the sales of such quality verified products since 2019, India remains one of the largest markets for solar lanterns and SHS. While the reports indicate that sales in India have declined from 953,000 in Jan-June 2019 to a low as 329,000 units between Jan-June 2021, the most recent reports indicate an uptick to 457,000 in Jul-Dec 2021, up from the previous half years of 405,000 (Jul-Dec 2020) and 329,000 (Jan-June 2021), while Kenya the only market globally which is larger than India, showed a decline. Hence there is a significant market in India which requires a closer look(Figure 1)<sup>1</sup>. Other South-Asian priority markets for GOGLA, like Bangladesh and Nepal are also moving away from the segment -esp. Bangladesh-after

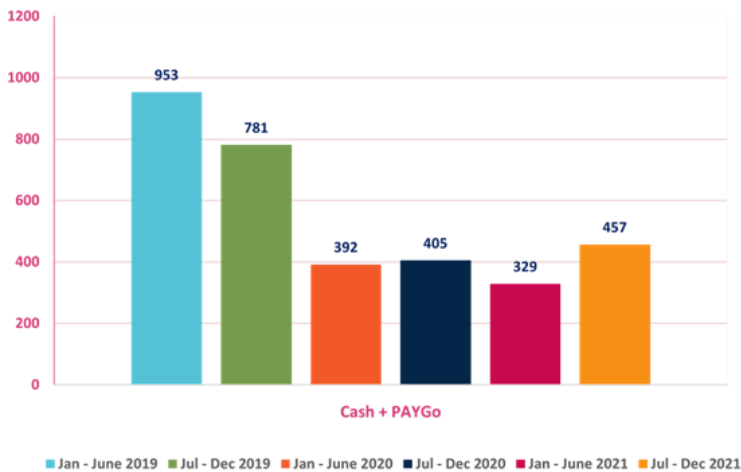
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<sup>1</sup> [gogla\\_sales-and-impact-reporth2-2021\\_def2.pdf](#)

Installing a record number of SHS. Understanding the existing conditions/markets for these product categories – those already installed and their future demand- is needed.

**Figure 1 – GOGLA affiliate sales in India (thousands)**

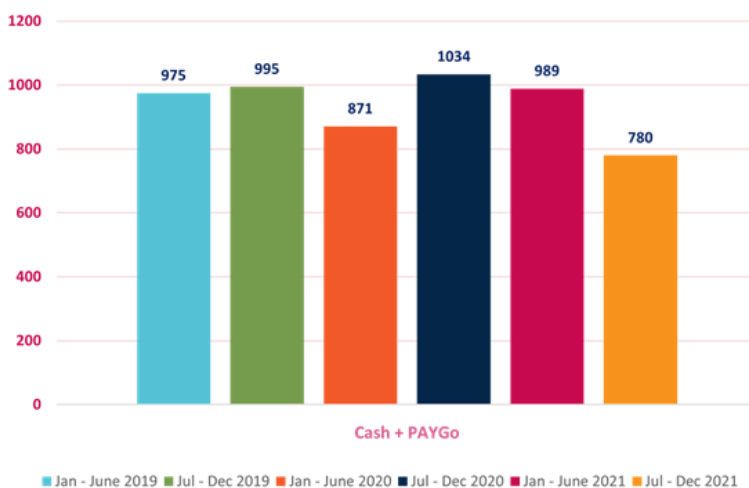
**Semi-annual Evolution of Volume of Lighting Products Sold – India**



Source: [GOGLA Sales and Impact Report, July – December 2021](#)

**Figure 2 – GOGLA affiliate sales in Kenya (millions)**

**Semi-annual Evolution of Volume of Lighting Products Sold – Kenya**



Source: [GOGLA Sales and Impact Report, July – December 2021](#)

In the past decade India had seen several initiatives from the GoI and development organisations to promote this category and make people aware of these products, as well as making them available. Notable among such are *Off-grid and Decentralized Solar PV Applications Programme-Phase III, Atal Jyoti Yojana (AJAY) - Phase II, Seven Million Solar Study Lamp Scheme for School Going Children, and IFC Lighting Asia/India program from the World Bank Group*. All such initiatives have been closed now and there is practically no ongoing support or focus for the sector.

The decline of SHS and lantern sales in India accompanied by the improved energy access has raised questions on the current state of the market and possible future role of lanterns and SHS in India. However, there is a paradox in the fact that despite the near universal energy access reports, India continues to be the second largest market in the World after Kenya and ahead of several large off-grid markets in Asia and Sub-Saharan Africa.

## The Study

### Justification for Proposed Study

This research will help inform GOGLA and its members on the current market status, future market needs and outlook. It will also inform the basis of GOGLA's engagement with policy makers and other partners in India on the off-grid solar sector including:

- Clarify the role and need for Solar Lanterns and SHS in India in the short and medium term (1-3 years) and alignment with Public Policy Interests.
- Possible need for, and structure of- continued govt engagement in solar lanterns and SHS and possible enabling public policy or program support if necessary.
- Inform GOGLA members and other actors in the off-grid solar sector on the approx. current and future market size for these products, consumer profile, and product profile to inform partner sector support initiatives and private sector business planning.
- To aid GOGLA plan its interventions better in India, Bangladesh and Nepal and support the sector.

### Objectives of the Study:

1. Analyse and elaborate the reasons for the decline in demand of SHS and lanterns market in India. Including – though not restricted to - is it purely due to increased energy access, are there new/alternative products that the customer has moved on to - replacing the need for solar lantern - e.g., an inverter bulb/other grid/off-grid products?
2. Elaborate the current and future role/uses/applications of solar lanterns and SHS in India in line with increased energy access, changing needs in terms of product profile/form factors etc- both(in) public/community applications e.g., health and education institutions, lighting and (ii) consumers e.g. in homes and business. An estimation of the market size/potential in key sectors would be required.
3. Examine / clarify the future of solar lanterns and SHS in terms of the consumer profile in the short to medium term who are the current/future buyers- income levels, usage, and focus

geographies etc. (Use [GOGLA MTR 2020](#) (Key Customer Segments Pg 93) as reference but open to other methods)

4. What are the future trends/ from the market in terms of significant/emerging sales channels, including though not limited to MFIs, retailers, others (this point unlike the first 3 points should focus on the supply chain).
5. What would be the necessary actions from GoI, industry and other sector actors to sustain the sector and maximize its social and economic impacts in rural and or other low income communities in India.
6. Understand the current status of the DRE markets in Bangladesh and Nepal- in terms of state of the lantern and SHS markets (pre-installed and future demand) and productive use appliances-trends, policy, private sector participation etc.

### Scope of Work and Deliverables

To realize the activities, as described below, it is proposed that GOGLA would seek the support of an external consultant or firm for the envisioned 4-5 months.

#### Activity 1 inception phase

This phase will be initiated by a kick-off call with GOGLA.

Based on an initial review of available literature and other sources of information available, the consultant will clarify the approach that will enable them to deliver activities 2 and 3 in line with the stated objectives above. This includes pre-identifying key experts for interviews and states/districts for any potential fieldwork.

**Deliverables:** inception report detailing the approach and workplan in Word or PowerPoint format to be presented to GOGLA and an outline of the final report (see activity 2).

#### Activity 2:

##### Activity 2.1 research and data collection India

The consultant will leverage desk research, key expert interviews and focus group discussions with customers to collect the data necessary to deliver on the objectives stated previously. This will require covering topics including, but potentially not limited to:

- Analysing factors behind the decline of lantern and SHS sales in India
- Analysis of products on the market and future trends
- Understanding and defining customer profiles
- Analysing the supply chain and identifying its challenges
- Review policy and programmatic context and understanding future plans for government and development partners

#### Deliverables:

- Transcripts of FGDs
- Final report (Executive summary to be provided separately and along with the report too) summarizing the results of the research and fulfilling the objectives and the accompanying

annexes of materials used, interviews conducted, with their contact details, and other content as necessary. **An accompanying summary power point presentation is expected.**

- A policy brief aimed at GoI and other sector stakeholders and actors
- Two brief subsidiary report in PPT format for Bangladesh and Nepal
- 2 virtual presentations to the GOGLA Global Policy Working Group and to policy makers / other stakeholders in India.

### Activity 2.2 research and data collection Bangladesh and Nepal

The consultant will conduct desk research and a limited number of expert interviews to provide a short overview of those markets: key players, products, key trends, and challenges faced by companies in the SHS and lantern space.

**Deliverable:** Brief report with PowerPoint on recommendations for the DRE market in Bangladesh and Nepal

**Note:** The Consultant will need to share a draft version of each report with GOGLA for review. The consultant is expected to revise the drafts based on GOGLAs comments.

### Required Qualifications and Experience

The successful Consultant firm will bring with them:

- Track record of successfully carrying out research projects similar in scope and complexity.
- Experience in developing and implementing research designs for and with the private sector.
- Solid understanding of the off-grid lighting and electrification sector, particularly in India.
- Excellent communication and coordination skills.
- Experience in drafting high-quality written reports in English.

### Timelines

1. Inception report including an annotated outline and initial summary of proposed work: Week 4
2. Midline review: Week 8
3. Draft Report: Week 12
4. Final report and draft presentation: Week 16
5. Final presentation incorporating GOGLA feedback to GOGLA members/others: Week 18

### Budget

GOGLA has earmarked a budget and all other expenses like travel if required, for this project, and it will be communicated to the applicant firm on enquiry.

### Submission of Proposals

Submissions must include a technical and financial proposal to be considered. The technical proposal should detail suggested approach and work plan to carry out the project. It should further include CVs of key staff of the research team, including links or references to previous similar work. The financial



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proposal should provide a break-down of daily rates and any additional third-party costs. All taxes and charges should be included. The proposal must be submitted:

1. In English, and valid for a minimum period of 120 days.
2. To Praviin B Kumar ([p.kumaar@gogla.org](mailto:p.kumaar@gogla.org)) and Patrick Tonui ([p.tonui@gogla.org](mailto:p.tonui@gogla.org)) by COB (CEST), **Friday, 9th of September, 2022.**

Questions regarding this Terms of Reference should be directed prior to the submission, in English, to Praviin B Kumar ([p.kumaar@gogla.org](mailto:p.kumaar@gogla.org)) and Patrick Tonui ([p.tonui@gogla.org](mailto:p.tonui@gogla.org)).