Indo-German Energy Programme – Access to Energy for Rural Areas

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Terms of Reference (ToR) for site selection for undertaking consumer awareness campaign and for developing a relevant toolkit for improving the market intelligence leading to promotion of solar powered irrigation technologies under 'The Access to Energy for Rural Areas of Indo-German Energy Programme'.

1. Background

The Access to Energy Programme under the Indo-German Energy Programme (IGEN-Access) is a bilateral technical co-operation measure between the Federal Ministry for Economic Co-operation and Development (BMZ), Germany and the Ministry of New and Renewable Energy (MNRE), Government of India. The project aims at improving the sector environment for inclusive rural energy enterprises. The IGEN-Access project is currently being implemented in four states of Uttarakhand, Uttar Pradesh, Bihar and West Bengal. The programme will be implemented over a period of three years (March 2015 – March 2018). BMZ has commissioned GIZ with the implementation of the project. GIZ is a federal enterprise based in Eschborn and Bonn, Germany.

BMZ supports the international initiative called "Powering Agriculture: An Energy Grand Challenge for Development" (PAEGC), where it collaborates with USAID, the Swedish International Development Cooperation Agency (SIDA), Duke Energy Corporation (Duke) and the Overseas Private Investment Corporation (OPIC). The objective of PAEGC is to develop and scale clean energy solutions1 for increased yield, decreased post-harvest loss, and increased value added processing - while simultaneously working to decouple the agriculture/fossil fuel linkage and invest in low-carbon economic growth. The BMZ has commissioned GIZ to implement this contribution to the PAEGC on its behalf through the project "Powering Agriculture sustainable Energy for Food – PA". The German contribution includes support for innovative cooperation formats with private and public sector actors which demonstrate scalable actions.

[1] In the context of PAEGC, the term 'clean energy' is defined as: Usable energy (i.e. electricity, illumination, heating/refrigeration, mechanization) that is derived from renewable sources and supports a reduction in fossil fuel use, increase in efficiency, and/or limitation of greenhouse gas emissions. Clean energy sources include – solar, hydro, wind, geothermal, sustainably harvested biomass, and biogas.

IGEN Access and PA jointly aim at nurturing the Market Ecosystem for Solar Powered Irrigation in India.

2. Context

The market for solar powered irrigation systems in India is at present primarily dependent on government subsidies. With the removal of government subsidy from diesel and petrol, reduction in the global price for solar panels and the promotion of access to end user financing through banks, there are high potentials for a market-based approach for promotion of solar powered irrigation systems (solar powered pumps and increased water input efficiency by applying technologies like drip irrigation). The Indo-German Energy Programme- Access to Energy in rural areas (IGEN-Access) programme of GIZ India in Partnership with GIZ PA aims to create an enabling market environment for increased adoption of solar powered irrigation systems by addressing some of the key challenges that currently hinder market growth and market penetration. While the site selection activities proposed under the implementation proposal will be targeting locations in Uttar Pradesh, Bihar and West Bengal where farmers are presently using fossil fuel based pumps for irrigation, the second assignment would require data collection across India.

3. Objectives

To assist IGEN- Access and PA team to create awareness about Solar powered irrigation systems (SPIS) amongst potential and relevant stakeholders for developing and improving the overall market ecosystem for the same.

4. Scope of Work

The scope of work is divided into two broad sections. The scope of work under section 4.1 (work package 1) deals with the background research for site selection for undertaking the consumer awareness campaign in the states of Uttar Pradesh, Bihar and West Bengal. The scope of work under section 4.2 (work package 2) deals with supporting IGEN Access team in designing and developing a market intelligence toolkit for promotion of solar powered irrigation systems. To summarize the work packages are as follows

- Work package 1: To assist IGEN-Access team in shortlisting of suitable sites in Uttar Pradesh, Bihar and West Bengal for undertaking consumer awareness campaigns for promotion of solar powered irrigation technologies.

- Work package 2: To assist IGEN Access team in designing and developing a tool to improve market intelligence on solar powered irrigation technologies.

4.1 Shortlisting of suitable sites in the states of Uttar Pradesh, Bihar and West Bengal for undertaking consumer awareness campaign for promotion solar powered irrigation technologies

Lack of knowledge (on availability, affordability and awareness) about the solar powered irrigation systems is one of the key reasons for the poor demand of the technology. Lack of clear understanding of the benefits of solar powered irrigation systems, price range of the system components along with the lack of knowledge of the potential financial support through bank loans often delays the purchase decision of the farmers.

Dedicated consumer awareness campaigns will improve knowledge not just about the technology components but also about the possible end user financing through banks. A focused awareness campaign would improve the knowledge on availability of the technology and on the potential end user financing systems available through banks. GIZ will pilot the consumer awareness campaign in two districts in each of the three states of Uttar Pradesh, Bihar and West Bengal. The present scope of work entails narrowing down the most suitable geographical areas for undertaking the consumer campaign.

Main tasks

- Together with the IGEN Access team develop a set of relevant and suitable criteria for site selection. Technical indicators like crops and vegetables cultivated, agri-climatic zones, water tables, income opportunities, and non-technical indicators like water governance structures, gender etc needs to be explored.

- Designing of a site selection matrix taking into account the most relevant technical indicators for undertaking consumer awareness campaign leading to promotion of solar powered irrigation technologies. The bidder will need to consult all the relevant stakeholders before finalizing the site selection matrix.

- Shortlisting of suitable geographical sites (two districts in each of the states of Uttar Pradesh, Bihar and West Bengal)

- Develop an inventory for each site shortlisting the suitable institutions/ organizations (like solar powered irrigation manufacturers, distribution companies, farmer's producer's company, women groups etc.) relevant for on the ground support during the consumer awareness campaign

- Organize at least two set of consultations for each site with most relevant organizations/ institutions in each of the shortlisted geographical regions to ensure initial consultation

We expect the bidders to answer the following questions as part of their proposal.

a) Based on the product and the price points, what benchmarks need to be looked at for developing the site selection matrix for consumer awareness campaign in the above mentioned three states? Kindly also keep in mind the key institutions who would/could play an important role during and after the consumer campaign in the region.

b) What approach would the bidding firm like to follow to narrow down the suitable sites? What would be your step by step approach to reach the final outcome for site selection?

c) Who would be the key stakeholders for data collection and which methodology would be adopted to collect relevant data? We would also request you to share the key cornerstones for the site selection matrix. What would be the broad overview of the site selection matrix?

d) What are the perceived risks and the necessary mitigation strategies for the intervention?

Please elaborate roles and responsibilities of the different members of the implementing team as part of your proposal.

4.2 Design and develop a market intelligence toolkit to have an overview of the different manufacturers and suppliers of solar powered irrigation technologies

The sector growth of solar powered irrigation systems is hampered due to lack of availability of suitable market intelligence data on the different solar powered pump manufacturers, and distributors of allied agricultural products like sprinklers, drip irrigation system and other water distribution technologies in India.

IGEN-Access team wants to develop a comprehensive database on the key private sector players involved in the promotion of solar powered irrigation systems with a long term view on increasing consumer demand for better system integration of market actors (system design offered as a “one stop shop”).

Main tasks

- Collect and collate information to feed into a database of manufacturers, distributers and suppliers of solar powered irrigation system technologies. The database will largely cover the following areas

    i. The name and technology specifications of companies involved in manufacturing and distribution of SPIS components like Solar Panels, Pumps, Water Tanks, Water Distribution Systems and Monitoring Points in India
    ii. Kind of markets catered to by such companies (National and International)
    iii. Business Model adopted by the companies and their distributor (Business to Government, Business to Business and Business to Customers)
    iv. Number of installations across the country in different states etc.
    v. Degree to which the company already offers system integration (e.g. panel + pump; panel + pump + water tank; assessment of crop water requirement with resulting design of the system from power supply to watering point at the plant)

Develop the best possible format for presenting the data to a large section of the relevant audience like policy makers/ research bodies/ development community/ agricultural extension officers/ agri-universities, agri-equipment financers, credit risk officers in rural Banks, farmer producer companies etc.

In order to make justice to the selection process, we would expect the consultants to answer the following questions as part of the proposal.

a) What kind of information for which group of the target audience should go into the toolkit to make it useful for the sector? Kindly mention the best means for data collection to make the individual tools relevant/useful?

b) What approach do you suggest for developing the market intelligence toolkit?

c) What would you suggest as a communication strategy to share the collected data with the large set of potential target user's/stakeholders and ensure their usage of the data base?

d) What approach do you suggest to ensure sustainability of the toolkit even after completion of the IGEN-Access project?

Please elaborate roles and responsibilities of the different members of the implementing team as part of your proposal.

5. Deliverables

The specific deliverables for this assignment include –

a. Shortlisted geographical regions (6 disticts) for 3 states of Uttar Pradesh, Bihar and West Bengal based on a site selection matrix and consultation with relevant diverse stakeholders – by March 2016.
b. A comprehensive easy to use toolkit for improving market intelligence for solar powered irrigation technologies based on consultations with relevant sector stakeholders. – by August 2016

6. Structure of the proposal

We would highly appreciate brevity in response to the questions mentioned in the ToR. The applicant needs to answer each of the questions under the different work packages. The capability statement of each firm should be provided in the annexure of the proposal. We would request providing the roles and responsibilities of the team members.

7. Qualification criteria, Team composition, Timeframe & Reporting

The assignment requires diverse skills sets and experience and the bidder needs to ensure and prove that they have all the relevant skills needed for completing the assignment successfully. The bidding firm should have expertise in designing and developing diverse matrix based on multiple and diverse indicators for site selection for market campaigns and developing market intelligence toolkits for key sector stakeholders. The proposed team should have the following experience and expertise:

- Experience of designing and developing roadmap and strategy for rural marketing campaigns and /or for promotion of agricultural consumer products

- Experience with collection and analyzing of market data and designing of market intelligence toolkits for new products

- The proposed team for this assignment should have members with the following skills and experience.
    - At least one member with a significant experience in rural marketing / agricultural products
    - At least one member with a significant experience in developing and implementation of roadmaps and strategies for rural products consumer roadshows
    - At least one member with a significant experience in multi-media, IT skills and developing/ designing of websites

The bidding firms should provide relevant documents to evince the above-mentioned qualifications.

The total duration of the assignment is expected to be 10 months from signing of the contract. The site selection in the 3 states should be completed within the first 5 months. The draft market intelligence toolkit should be developed and discussed with relevant stakeholders by 7 month and the finalization of the toolkit should be completed by end of the 9 month of the contract.