

<p><b>Terms of Reference (ToR) for engaging a technical advisor to assist IGEN-PSWP team in promotion of solar water pumps sustainably in India</b></p>	<p>Project number / cost centre: 2016.2081.4 – 001.00</p>
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<b>1. Context.....</b>	<b>2</b>
<b>2. Tasks to be Performed by The Contractor .....</b>	<b>3</b>
<b>3. Scope of Work .....</b>	<b>3</b>
<b>4. Compulsory documents to be submitted .....</b>	<b>6</b>
<b>5. Eligibility Criteria.....</b>	<b>6</b>
<b>6. Project Steering and Reporting.....</b>	<b>7</b>
<b>7. Quality assurance and other requirements .....</b>	<b>7</b>

## 1. Context

The Promotion of Solar Water Pumps component of the Indo-German Energy Program (from now on referred to as PSWP module) 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. PSWP was commissioned by BMZ based on the lessons learned from the IGEN-Access module (2015 – 2019).

The project aims at promoting the sustainable use of SWP in view of the Water Energy Food nexus. The IGEN-PSWP module is being implemented pan-India with a focus on the East and North-East of India. The module is implemented over a period of four years (October 2018 – September 2022). BMZ has commissioned the Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) with the implementation of the project. GIZ is a federal enterprise based in Eschborn and Bonn, Germany.

The project objective is to ensure that solar pumps for productive use are rolled out more rapidly. The project will focus on federal states of Assam, Bihar, Jharkhand and West Bengal. Based in New Delhi, it will intervene at different levels to achieve its objective. At national level, it will provide advice to the central government. In selected federal states, it will actively involve central government agencies, agricultural extension services and providers of financial services in project measures and advise on these. It will also take account of the vital role played by the private sector by entering into specific cooperation arrangements.

The project will address different intervention levels (multi-level and multi-actor approach). It will provide advisory services for the central government (such as MNRE) at national level. In the selected federal states, it will actively involve relevant government agencies (such as SNAs), agricultural extension services and financial service providers in the project measures and provide advice to these. The project will take account of the key role played by the private sector (companies and associations) by entering into specific cooperation arrangements. It will also advise German businesses on accessing the Indian solar pump market. In terms of training, educational institutions will be given advice on assessing needs, developing curriculums and producing training documents. The project will attach special importance to gender equality in all activities. In cooperation with other projects and donors, it will provide farmers with direct advice, on, for example, selecting sites, managing irrigation, and operating and maintaining solar pump systems

### 1.1. The Areas of Activities for IGEN PSWP Project

The PSWP module aims to improve, expand and speed-up the roll-out of sustainable solar water pumps. The project will engage in four fields of activity: (i) adapting promotion policy, (ii) implementing successful business, operator and service models, (iii) facilitating access to finance and (iv) disseminating information and upscaling. The activities under the PSWP module will be implemented under the following four components:

- “Enabling Policy environment”, to enable policy-makers to design government promotion projects for the productive use of solar pumps in a way that is effective and environmentally sound.
- “Business, Operator and Service Modules”, to enable market stakeholders such as project developers, facility operators and non-governmental organizations (NGOs) to successfully replicate tested business, operator and service models for the productive use of solar pumps in selected federal states.

- “Access to Finance”, to enable financial service providers to offer customized financial solutions for financing solar pumps for productive use.
- “Information, Dissemination, and Upscaling”, to provide agricultural extension service providers in selected federal states the necessary knowledge to carry out technical, environmental and economic assessments of solar pumps for productive usage.

The project has 4 target states to support the rollout of Solar Water Pumps, namely: Assam, Bihar, Jharkhand, and West Bengal.

## **2. Tasks to be performed by The Contractor**

The IGEN PSWP project started in October 2018 and is ending in September 2022. The project is developing and preparing many important activities that would directly influence its defined outcomes and impacts. The project is also planning to have engagements with the project and other state governments departments/agencies etc like Assam, Bihar, Jharkhand and West Bengal.

Under this context, the IGEN PSWP project intends to engage a technical advisor (individual consultant) (hereinafter referred as “the contractor”) who is expected to support project managers of the IGEN PSWP project to design, set up and achieve respective deliverables, combined with effective monitoring and evaluation.

### **The contractor is responsible for providing the following services:**

- Support in implementation of the PM KUSUM Scheme (target state Assam, Bihar, Jharkhand, and West Bengal)
- Support IGEN PSWP Team in monitoring, evaluation, review, and documentation of multiple project activities.
- Coordination with other relevant departments for meeting the project objectives

**Period of assignment:** One year from the date of Contract

## **3. Scope of Work**

The concept behind having a technical advisor (individual contractor), as a technical back-stopper, who is well versed with the trends of emerging policy and market ecosystem for promotion of solar water pumps and who can support the project manager(s) of the IGEN PSWP project to design, set up and achieve respective deliverables, combined with effective monitoring and evaluation while ensuring objective of the IGEN PSWP project.

The key tasks for the contractor are as follows:

**Key Task 1:** Support in implementation of the PM KUSUM Scheme (target state Assam, Bihar, Jharkhand, and West Bengal)

**Key Task 2:** Support IGEN PSWP Team in monitoring, evaluation, review, and documentation of multiple project activities

**Key Task 3:** Coordination with other relevant departments for meeting the project objectives

### **Detailed Scope of Work**

The detailed scope of work under the key tasks are as follows:

#### **Key task 1: Support in implementation of the PM KUSUM Scheme (target state Assam, Bihar, Jharkhand, and West Bengal)**

The Government of India's has launched Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahaabhiyan (PM KUSUM) scheme in July 2019 which will support the installation of (i) stand-alone off-grid solar pumps to replace existing diesel pumps; (ii) decentralized ground or stilt-mounted, grid-connected solar power plants (~0.5–2.0 MW) by individual or group farmers, cooperatives or panchayats based on expressions of interest issued by distribution companies (DISCOMs) and available sub-station surplus capacity; and (iii) "solarizing" existing grid-connected pumps by outfitting them with solar panels, and allowing owners to sell excess electricity back to DISCOMs. The Project is currently focusing on supporting the state in rolling out solar water pumps under Component B and C of the PM KUSUM Scheme. The Contractor is expected to perform following activities:

- a) **Design a decision support tool:** - The Contractor will be responsible for developing a decision support tool for implementing the Component C of PM KUSUM Scheme. The components of the decision support tool along with its validation need to be finalized based on consultation with diverse stakeholders.
- b) **Comparative assessment of grid-connected solar water pumps models across various states:** - The Contractor shall carry out a comparative analysis of the existing models of grid-connected solar water pumps across various states. The Contractor has to initiated dialogue with 3 States for the successful engagement (with at least 1 discom) on potentials for grid-connected solar water pumps
- c) **Design and Prepare Frequently Asked Questions:** - The Contractor shall design and prepare Frequently Asked Questions (FAQ) on PM KUSUM Scheme for Component C of PM KUSUM Scheme. The target audience for the FAQ should be farmers and distribution companies. We expect the contractor to prepare the FAQ in the English language.

#### **Key task 2: Support IGEN PSWP Team in monitoring, evaluation, review, and documentation of multiple project activities.**

The contractor shall support the team as and when required in the following areas:

- a) Concept note and analysis on potential business models for productive/sustainable use of solar water pump (involving CSR, NGO, Financial institution, Private companies, and others) primarily within the focal states. And organizing at least 2 roundtables around them (please refer deliverables section for details).
- b) Support the team in reviewing and providing inputs for the documents/reports/knowledge products

**Key Task 3: Coordination with other relevant departments for meeting the project objectives**

The contractor has to coordinate with the MNRE, appropriate State Nodal Agencies other relevant departments within and outside the project states. Following are some of the identified tasks:

- a) Identify and support in leveraging different state departments for GIZ intervention with reference to Solar Water Pump and assisting the project manager to facilitate the dialogue with the relevant states for initial engagements at the state level
- b) Participate in the strategic meetings at centre and state levels together with the IGEN PSWP project managers as and when required
- c) Facilitate the establishment of formal engagement with relevant stakeholders, Ministries, state departments, etc.
- d) The States sometimes requests to visit the places where best practice for solar water pumps has been implemented. For example; Assam has requested to visit the state of Odisha to understand their model and meet relevant stakeholders. The contractor is expected to facilitate the exposure visit, if required.

**The break-up of person-days required (for one year)**

Task No	Tasks	No of person-days
1	Support in implementation of the PM KUSUM Scheme (target state Assam, Bihar, Jharkhand, and West Bengal)	60
2	Support IGEN PSWP Team in monitoring, evaluation, review, and documentation of multiple project activities.	40
3	Coordination with other relevant departments for meeting the project objectives	20
	<b>Total number of days*</b>	<b>120</b>

**The contractor might need around 15-20 nights of overnight travel. However, the actual number of travel nights will depend on the approach.**

\*The no of days allotted under each activity are indicative and GIZ reserves the rights to shuffle the days depending upon the requirement of each activity. Considering the project requirements and skillsets of the contractor, GIZ might also request ad-hoc assistance from the contractor. However, total number of days will remain same.

**Deliverables**

Besides providing technical suggestions and inputs on specific topics (as mentioned above) the Contractor is expected to provide the following deliverables. All deliverables must be accepted by GIZ before submission.

- i. A road map in the form of a report and a decision support tool in Microsoft Excel, for grid-connected solar water pumps
- ii. Comparative assessment of grid-connected solar water pumps in various states
- iii. Design and prepare Frequently asked questions for Component C of PM KUSUM Scheme
- iv. Conceptualize and organize at least 2 roundtables with experts on Component C of the PM KUSUM Scheme (the roundtable can be organized at GIZ's office in New Delhi)
- v. 3 concept notes on productive uses of solar water pumps along with the roadmap for installation
- vi. At least 6 documents/reports/knowledge products reviewed/provided inputs

#### **4. Compulsory documents to be submitted**

The Contractor is expected to submit a technical proposal and a financial proposal separately in hard copies. We expect the contractor to also submit the soft copy of the technical proposal in the pen drive along with the password (in case the file is password protected) in addition to the hard copy. Please **DO NOT add financial proposal** in the pen drive otherwise the bid will be considered as disqualified.

The contractor also has to submit a Curriculum Vitae specifying all the skills mentioned in the Eligibility Criteria section below and provide proof of the same wherever necessary.

The contractor must specify the answer to the following questions in the proposal. The answers to the questions must be short and concise (up to 300 words per answer) The contractor will also be evaluated based on the answers to the below questions.

1. Based on the understanding of the assignment, we would expect the contractor to provide an outline of the road map for grid-connected solar water pumps
2. Please elaborate on the approach to the comparative assessment of grid-connected solar water pumps in various states. Kindly mention the aspects which would be taken into consideration and the process to shortlist the relevant state of the assignment.
3. What could be the structure the frequently asked questions and how will it be structured? Please specify at least 3 sample questions along with sample answers.

**The shortlisted candidates may be invited for a presentation in GIZ Delhi Office within 40 days of the submission of the proposal**

#### **5. Eligibility Criteria**

The contractor needs to demonstrate the following ability through adequate references and documents.

- This Assignment is for Freelance /Individual Contractor Only. The Consultant should not be on the payroll of any firm.
- The contractor must have a bachelor's degree in relevant field and post graduate degree in energy, management or related field from premier institutes.
- Proven experience of at least 10 years in energy sector. Experience in Distributed Renewable Energy and Solar Water Pump sector will be an added advantage

- Proven experience of at least 2 years working with discoms. Experience in grid integration issues will be preferred
- At least 5 years of experience in Advisory Services in energy domain
- Proven experience of managing complex projects with multiple stakeholders in RE Space, liasoning with Ministries/departments/Agencies

**The contractor who are applying should meet all the above-mentioned criteria. Evaluation will be done only if all the abovementioned criteria have been met.**

## **6. Project Steering and Reporting**

- The contractor will report to the IGEN PSWP project managers of the respective work packages;
- The contractor will submit filled work timesheets and activity reports to the Project head of the IGEN PSWP project in the template provided by GIZ.

## **7. Quality assurance and other requirements**

To ensure the quality of the outputs the firm of contractors has to meet the following requirements:

- GIZ honors intellectual copyrights and strictly prohibits any copyright violations and plagiarism;
- The contractor ensures that GIZ staff is briefed continuously on the progress of the project and informed immediately on any changes whatsoever (e.g. delays, availability of information, etc);
- The contractor has to maintain the confidentiality of the data. The data/information/findings/outputs and any other classified information collected under this assignment shall not be used by the contractor anywhere and in any manner without GIZ permissions. It is not encouraged that based on the information collected through the assignment any research work is conducted with an intention to publish research papers and/or conduct thesis work in an individual capacity;
- All communication with media (TV, radio, print and other media) has to be approved by the responsible person of GIZ;
- Timelines shall strictly adhere and delay in any of the deliverables shall be reported and aligned with GIZ in advance.

### **Note**

GIZ reserves the right to terminate the contract.