

1 Statement of Work (ToR) for the procurement of services

CONFIDENTIAL

Terms of Reference (ToR) for Hiring a Consultancy Firm/Consortium to Provide Technical Assistance Strengthening PM-KUSUM Comp B Implementation		Project number/cost center: G-012097-001	Tender no.
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0. List of abbreviations

AG	Client
DRE	Decentralised Renewable Energy
ON	Contractors
GTC	General Terms and Conditions of Contract for the Provision of Services and Works
FK	Specialist
FKT	Skilled Worker Days
FPO	Farmer Producer Organisation
KZFK	Short-term specialist
O&M	Operation and Maintenance
PM-KUSUM	Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan
RE	Renewable Energy
SHGs	Self Help Groups
SiRA	Solar in Rural Areas
ToR	Terms of Reference

1. Context

1.1 Introduction of Solar in Rural Areas (SiRA)

Solar in Rural Areas (SiRA) module under the energy cluster of Gesellschaft für Internationale Zusammenarbeit (GIZ) India is aimed at improving livelihood options for rural women through solarisation of agricultural activities. SiRA is a bilateral technical cooperation measure between the Federal Ministry for Economic Co-operation and Development (BMZ), Germany and the Ministry of New and Renewable Energy, Government of India. It is being implemented pan India with a focus on the East and North-East of India, over a period of three years (October 2024- September 2027).

The objective of the module is solarisation of rural areas specially aimed at improving livelihood options for women. The project will engage in four specific fields of activity: (1) Empirical impact data on the energy-gender nexus; (2) Government agencies are equipped to design the promotion of decentralised solar energy in a gender-responsive way; (3) Improved access for women to capacity development measures; (4) Enablement of financial service providers to finance solar applications for women.

1.2 Introduction to the Assignment

The Government of India launched the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) in 2019 with the objective of ensuring reliable access to clean energy for farmers, enhancing water security, diversifying farmer income, and reducing dependence on diesel-based irrigation systems. The scheme is structured into three distinct components, each addressing specific energy requirements in the agricultural sector:

- Component A: Decentralized, grid-connected solar power plants
- Component B: Stand-alone solar pumps
- Component C: Solarization of existing grid-connected agricultural pumps, including feeder level solarization

The PM-KUSUM scheme has facilitated the installation and solarization of nearly 20 lakhs agricultural pumps, thereby contributing significantly to India's renewable energy targets and rural energy access. Each component has been designed with a differentiated approach to cater to varied agricultural and energy-use contexts across states.

To support effective implementation, the scheme guidelines incorporate several provisions aimed at improving adoption, ensuring access to finance, and strengthening after-sales services. These provisions have also been updated to address emerging challenges and implementation gaps. For example, to ensure the long-term functionality of solar water pumps, empanelled vendors (such as system integrators, technology providers, and manufacturers) are required to provide operation and maintenance (O&M) support for a mandatory period of five years from the date of installation. This includes establishing real-time monitoring systems, helplines, district-level service centres, and adherence to defined standards of performance for complaint resolution and service delivery.

Under PM-KUSUM Component-B, empaneled vendors are responsible for the supply, installation, and operation and maintenance (O&M) of solar pumps for a mandatory period of five years. During this period, vendors are expected to establish service centers, deploy trained

technicians, maintain adequate spare parts, provide complaint redressal mechanisms, and ensure that the installed pumps remain functional.

As an increasing number of PM-KUSUM solar pumps approach the end of the mandatory five-year warranty period, there is a need to better understand the challenges associated with ensuring continued operation and maintenance support beyond the vendor's contractual obligations. In several areas, particularly remote locations, farmers may face challenges in accessing timely repair services, spare parts, and technical support, which can affect the long-term functionality of the systems.

At the same time, MNRE is undertaking several initiatives to strengthen the implementation of PM-KUSUM, including improving interoperability of solar pump controllers to reduce dependence on individual vendors and exploring measures to strengthen vendor accountability, including mechanisms to prevent blacklisted vendors from re-entering the program through different entities or arrangements. These initiatives are expected to improve the overall implementation framework; however, there remains a need to understand the practical O&M challenges experienced on the ground and identify sustainable approaches for strengthening post-warranty support.

To support this process, GIZ, in collaboration with MNRE, proposes to engage a consultant to assess the existing O&M ecosystem for PM-KUSUM solar pumps installed under Component B of PM KUSUM Scheme, identify key O&M challenges and good practices, and compile and customize existing O&M training materials to develop and test a practical approach for strengthening local first-level O&M support through six pilot trainings.

The Contractor will facilitate the selection of three representative states in consultation with MNRE and GIZ by developing an objective assessment framework and decision matrix. The selected states should represent different geographical and implementation contexts, including areas experiencing significant O&M challenges as well as locations demonstrating good practices. The assessment will examine the effectiveness of existing service arrangements, identify operational, technical, institutional, and financial challenges, assess vendor performance and local support systems, and provide recommendations for strengthening post-warranty O&M under PM-KUSUM. The findings will also help inform future interventions and complement MNRE's ongoing efforts to improve

1.3 Contractor Task

The Contractor is responsible for the provision of the following services:

1.3.1 Work Package 1: Assessment of the Operation and Maintenance (O&M) Ecosystem under PM-KUSUM

The Contractor shall assess the existing operation and maintenance (O&M) ecosystem for PM-KUSUM solar water pumps and provide recommendations for strengthening post-warranty O&M support. The Contractor shall undertake the following tasks:

Activity 1.1: Stakeholder Consultations and assessment framework-

The Contractor shall engage with key stakeholders to understand the existing O&M ecosystem and implementation challenges.

- Prepare a stakeholder engagement plan in consultation with GIZ and MNRE.
- Organize consultations with MNRE, State Nodal Agencies, empanelled PM-KUSUM vendors, and other relevant stakeholders.
- Organize and facilitate at least two vendor roundtables to understand existing O&M practices, key challenges, and good practices.
- Document the current roles and responsibilities of different stakeholders involved in post-installation O&M and assessment of the situation on ground in consultation with SIA.
- Identify vendors willing to support the field assessment and share implementation experiences.
- Develop a decision matrix and selection criteria for identifying suitable states, districts/blocks, vendors, and locations for the field assessment.
- Define assessment parameters, including number and concentration of PM-KUSUM installations, pumps nearing completion of the warranty period, remoteness, service gaps, vendor performance, availability of technicians and spare parts, existing local institutions, and potential for replication.
- Consult MNRE, GIZ, State Nodal Agencies, and participating vendors to validate the assessment framework and facilitate the selection of representative assessment locations.
- Develop field assessment tools, interview guides, and data collection formats.

Activity 1.2: Field Assessment and O&M Challenges Mapping

The Contractor shall undertake a field-based assessment in the selected states to understand how O&M of PM-KUSUM solar pumps is working in practice, identify the main challenges and good practices, and recommend practical options for strengthening post-warranty O&M.

- Conduct field visits and discussions with beneficiaries, vendors, technicians, service centre staff, State Implementation Agencies, FPOs, SHGs, district officials and other relevant stakeholders to understand the actual O&M situation.
- Assess service centres, technical manpower, spare parts, complaint handling, response time, preventive maintenance, common faults, pump downtime and the challenges and cost of servicing remote locations
- Assess high-performing, low-performing and, where relevant, blacklisted or previously penalized vendors to understand their actual performance, available resources, service systems, data quality, willingness to provide O&M and the factors that support or limit their performance.
- Identify the main reasons for O&M gaps, including vendor capacity and accountability, geographical and logistical challenges, financial viability, shortage of local technicians and other service-related issues.
- Assess the potential for first-level local O&M support through Farmer Producer Organisations (FPOs), Self Help Groups (SHGs), local entrepreneurs or trained

technicians, including availability of suitable persons, service demand, required skills, tools, spare parts and technical back-up.

- Identify and document good practices and distinguish between gaps that can be addressed through local capacity development and those that require improvements in the vendor or wider service delivery system.
- Based on the findings, recommend suitable post-warranty O&M models, define the roles of MNRE, State agencies, vendors and local service providers, and develop a simple implementation framework covering selection criteria, service and escalation processes and monitoring.
- Identify linkages with relevant ongoing initiatives, such as interoperability, vendor accountability and insurance, and present the findings and recommendations to MNRE and GIZ for validation and finalisation.

1.3.2 Work Package 2: Collection customization and Testing of Capacity Development of potential local O&M Service provider

The Contractor shall identify and review existing O&M training resources, customise suitable materials based on the identified capacity needs, and develop a practical training approach for potential local O&M service providers. The approach will be tested through six training programmes, with feedback and field level learnings used to refine the training content and delivery approach.

Activity 2.1: Identification, Review and Customisation of Existing O&M Training Resources

Identify existing training programs, curricula and Technical Resources (TRs) on solar pump O&M, assess their availability for public use and review their suitability against the capacity needs identified through the field assessment. Based on this review, define simple standards for selecting and assessing training resources.

- Compile and customize suitable existing resources rather than developing a new training course from scratch. The customized content should cover first-level O&M skills, including preventive maintenance, basic troubleshooting, common faults, basic repairs, spare parts and escalation to specialized technicians.
- Develop a practical and easy-to-use capacity development design and content comprising presentations, simple guides and checklists, practical demonstrations, selected video clips from existing resources, case examples and interactive exercises. This will be known as Training Package. The content should be available in English and adapted into the relevant local languages to make learning simple, practical and easy to retain.
- Define the target participant profile, selection criteria, training duration and delivery approach, and develop the training in active collaboration with selected PM-KUSUM vendors and relevant technical institutions to ensure practical relevance, continuity and sustainability of the local O&M support model.

Activity 2.2: Conduct six practical training sessions for selected local O&M service providers to test the customized training approach and gather feedback for refinement.

Identify suitable locations and participants in consultation with GIZ, MNRE, State agencies, vendors and local institutions, using available FPO/SHG databases and other local sources.

- Design the training based on consultation with MNRE and GIZ's recommendation/documentation. The contractor will use the checklist which would be provided by GIZ to design gender responsive training.
- Organize and conduct six pilot training programs for selected local participants, with practical and hands-on sessions wherever feasible.
- Coordinate with participating vendors and technical experts to provide technical inputs, access to operational pumps. Collect participant feedback and document challenges related to the training, practical application and availability of post-training support.

Activity 2.3: Learning and Scale-up Approach

- Assess the outcomes of the six pilot trainings, including participant learning, relevance of the training materials and ability of trained people to undertake first-level O&M.
- Identify barriers to post-training service delivery, including availability of tools and spare parts, service demand, travel costs, income potential, technical back-up and vendor linkages.
- Refine the training package and delivery approach based on the pilot experience.
- Develop recommendations for scale-up, including participant selection, training delivery, vendor linkages, post-training support and monitoring.

1.4 Key Deliverables

- **Work Package 1: O&M Assessment**
 - 2 pagers on brief of Stakeholder Consultation and Assessment Framework.
 - 10 pager O&M Assessment and Challenges Mapping Report, including key findings from the three states, vendor assessment, good practices and key O&M gaps recommendation and way forward
- **Work Package 2: Capacity Development and Pilot Trainings**
 - O&M Training Package: Assessment and compilation of relevant existing O&M training resources, followed by customization and/or development of suitable training content based on the needs identified under WP1. The package may include presentations, selected video clips from existing resources, practical guides/checklists, manuals and other innovative learning formats, in English and relevant local languages.
 - Six test Trainings: Delivery of six practical training courses using the proposed training package, including participant feedback, assessment of learning, key implementation challenges and learnings on the skills and support required for effective first-level and post-warranty O&M.
 - Capacity Development and Scale-up Recommendations (4 pages): A concise strategy based on the assessment and pilot experience, covering the recommended target group, training approach, delivery model, role of vendors and technical institutions, post-training support, and key considerations for scaling up the local O&M model.

The contractor should adopt the gender sensitive and responsive approach while looking at the issue and providing solutions. Wherever possible, the contractor should consider the role of women in promoting PM KUSUM and addressing the challenges.

AI Use and Confidentiality Disclaimer

The Contractor shall disclose any use of Artificial Intelligence (AI) tools during the assignment and clearly indicate the activities or deliverables for which AI has been used.

The Contractor shall not upload, share or process any confidential, sensitive or personal information received from GIZ, MNRE, State agencies, vendors, beneficiaries or other stakeholders through publicly available or unauthorised AI tools. All information and data shared under the assignment shall be handled in accordance with applicable confidentiality, data protection and information security requirements.

The use of AI shall not replace the Contractor's own professional analysis, field assessment, stakeholder consultations or judgement. The Contractor shall remain fully responsible for the accuracy, quality, originality and confidentiality of all outputs, including any content prepared or supported through AI tools. Any AI-generated information used in the deliverables shall be reviewed and independently verified by the Contractor before submission to GIZ.

1.5 Communication Product

The Contractor is expected to submit the deliverables as mentioned above. Before submission of final product, GIZ expects a well-articulated and detailed methodology to carry out the designing assignment along with the outline, required framework and timeline for submission of final output.

Format

The Contractor must submit well designed and high-quality product in print ready and publishable format to GIZ. While designing the documents, it is to be ensured that GIZ corporate design guidelines are followed consistently (corporate design will be shared) throughout the document. The content of the documents should be well-edited including language & grammar, layout, formatting, typeset the document and inclusion of suitable infographics. The documents should have cover page/title page, imprint page, acknowledgement and disclaimer for the data collected, photos with caption, list of acronyms and table of content. The final product/documents would belong to GIZ only and hence GIZ logo should be used throughout the document following GIZ communication guidelines. The Contractor should avoid using their own logos and its corporate communication/content.

Consent forms

Before taking photos during the assignment, the Contractor must ensure that the GIZ consent forms (for everyone appearing in the photos) are filled and signed by individuals and by the

guardians in case photos are taken for children. The consent forms should be submitted to GIZ with the final deliverables.

Copyrights

All deliverables, products, materials developed under this assignment shall be the sole property of GIZ and should not be used or shared for any other purpose with others by Contractor. GIZ holds an unlimited copyright to all produced material and assets. The Contractor shall ensure that GIZ's copyrights are always respected and followed. The Contractor shall be responsible for obtaining necessary permissions/license/royalties for any material used unless provided by the project.

Data Protection

The performance of the Contract may involve the processing of personal data by the Contractor, such as (but not limited to) the processing of names and contact information. In such cases, the Contractor acts as an independent DATA CONTROLLER and must comply with ALL applicable data protection obligations, including those arising from regional and local laws. The Contractor may only process personal data if the objective to be achieved cannot be achieved without this data. The data protection principles such as lawfulness, data minimization, accuracy, purpose limitation, storage limitation, transparency, integrity and confidentiality and accountability as well as the numerous rights of the data subject must be observed. GIZ is in no way responsible for such processing. In cases where the contractor follows the instructions of a GIZ partner, the partner is the data controller. The laws and standards applicable to it and the contractor must be complied with and implemented. If the Contractor is not subject to the GDPR and the applicable laws do not contain any explanations of the data protection principles and rights mentioned here, the definitions of the GDPR (Regulation (EU) 2016/679) should be used.

Program Steering and Reporting

- The Contractor will report to Project Manager (to be nominated) from the SiRA programme.
- During the period of assignment, the Contractor is expected to report monthly basis regarding the progress on the assignment. The Contractor is expected to develop a Project Monitoring Sheet (PMS) for regular tracking of progress made on the assignment. The format of PMS will be shared with the Contractor.
- The Contractor will develop necessary factsheet(s) on project, process, and products (interim & final). The parameters and template will be developed in consultation with GIZ.
- The Contractor is expected to develop a detailed monitoring mechanism to explain how the Contractor will achieve the desired impact sustainably.

Milestones/Partial Works	Date/Place/Responsible	Acceptance criteria
Kick-off meeting	First week from the signing of contract	MoM of the meeting
Work Package 1		

Stakeholder Consultations including two vendor roundtables	One Month from the signing of the contract	MoMs of the consultations/roundtables with list of participants and photos submitted to GIZ
2 pagers on brief of Stakeholder Consultation and Assessment Framework.	40 days from the signing of the contract	Submission of 2 pager to GIZ
O&M Assessment and Challenges Mapping Report, including key findings from the three states, vendor assessment, good practices and key O&M gaps and recommendation (10 page)	3 Months from the signing of the contract	Submission of 10 pager and Presentation copy of the assessment and mapping of O&M Challenge to GIZ
Work Package 2		
O&M Training Package	3 Months from the signing of the contract	Submission and acceptance of the package by GIZ
Six Test Trainings	8 Months from the signing of the contract	GIZ provided filled checklist along with proof of performance mentioned in the checklist
Final Capacity Development and Scale-up Recommendations (4 page)	10 Months from the signing of the contract	Submission of final deliverable to MNRE

Period of use: From November 2026 until September 2027 (10 Months).

The bidders will be asked for presentation before the financial bid opening.

2 Concept

In its bid, the bidder should explain *how* the services specified in Chapter 2 (Task) are to be provided, possibly taking into account further methodological requirements (technical-methodological concept). In addition, he must describe the design of the project management for the provision of services.

2.1 Technical-methodological conception

Strategy (1.1): The bidder should deal with the task against the background of the objectives of the services tendered (see Chapter 1 Context) (1.1.1). The bidder should then present and justify the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Task) (1.1.2).

As part of the strategy description, the bidder is expected to provide concise responses to the following questions. Failing to answer the below question will lead to disqualification:

1. *Please explain how you would assess PM-KUSUM vendors based on parameters such as O&M service coverage, availability of trained technicians and spare parts, response and repair time, pump uptime, complaint resolution, quality of service data, and service performance in remote areas, including the performance of high-performing, low-performing and, where relevant, blacklisted or previously penalised vendors, and their implications for post-warranty O&M*
2. *Please explain the steps to assess and map the existing O&M gaps for PM-KUSUM solar pumps on the ground, including how you would engage vendors and other relevant stakeholders as part of the assessment.*
3. *How would you identify the skills required for local first-level O&M, including the key parameters you would assess, the methodology you would use to identify and review relevant existing training programmes and materials, the approach for adapting and delivering the training, and the methodology for assessing its effectiveness?*
4. *Please identify the key risks you foresee in undertaking this assessment and recommend suitable mitigation measures.*
5. *How would you use Artificial Intelligence (AI) during the assignment, and what proportion of the work do you anticipate using AI for? Please clearly indicate the activities where AI would be used and the activities that would require your team's own analysis, field assessment and professional judgement.*

The bidder should present the relevant actors for the services for which it is responsible and describe the **cooperation** (1.2.1) with them and its strategy (1.2.2).

The bidder should present and explain its approach and approach to **managing** the measures with the project partners (1.3.1) and its contribution to **impact monitoring** (1.3.2).

The bidder should describe the central **processes** of the services under its responsibility and draw up an **operational plan** or schedule (1.4.1) that clarifies how the services are to be provided in accordance with Chapter 2 (Tasks for the Bidder). In particular, it should describe the necessary work steps and, if necessary, take into account milestones and **contributions** from other actors (partner contributions) in accordance with Chapter 2 Task (1.4.2).

The bidder should describe its contribution to the knowledge management of the partner (1.5.1) and GIZ as well as to the promotion of scaling-up effects (1.5.2) under **Learning and Innovation** .

2.2 Project Management of the Contractor (1.6)

The bidder should explain the approach and procedure for coordination with the GIZ project. In particular, the project management requirements mentioned in Chapter 2 Task for Contractors must be addressed.

The bidder is to draw up and explain a **personnel deployment plan** for the entirety of the specialist staff it offers, which maps the deployment times (period and specialist days) and locations of the individual team members and assigns them the work steps specified in the schedule.

The bidder is to describe its Backstopping concept. The following services are part of the standard package for backstopping, which, in accordance with Section 3.1 of the GIZ General Terms and Conditions of Employment, are to be included in the fee rates of the staff offered in the same way as ancillary personnel costs:

- Performance monitoring
- Control to adapt to changing conditions
- Ensuring the flow of information between the contractor and the client
- Personnel responsibility of the Contractor for its specialists
- Process-oriented control of order execution
- Ensuring administrative project execution

3 Criteria for Eligibility of Firms

I. Commercial Eligibility

- The agency must be legally registered in India.
- The agency must submit a signed / stamped declaration on company's letterhead, if adhere to GWB clauses. (Refer- Annex "Legal Inferences")
- Minimum average annual turnover of 70,000 EUR for the last three financial years {last-but- four financial can be included in case of invitation to tender held within six months of end of last financial year. (All conversion rates must be taken from Info-euro site: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-inr.en.html)
- The average no. of managers & employees from past three calendar years must be 05.

II. Technical Eligibility

- The consulting firm must have completed at least **one (1) reference** assignments related to Solar Water Pumps or PM-KUSUM Scheme in India. Each reference assignment must have had a minimum contract value of EUR 20.000

Weighted Criteria

1. Technical Experience

- Three (3) years of experience in Renewable Energy projects preferably PM-KUSUM related projects.
- Three (3) years of experience in understanding of Operation and Maintenance of Renewable Energy Projects.
- Three (3) years of experience working in Capacity Development in RE Sector especially with rural community.

2. Regional Experience in India.

Please refer document “Grid for Eligibility of consulting firms” and its Annex for details. The documentary evidence of the criteria listed above must be submitted as per Annex A of bidding conditions.

4 Personnel concept

The qualifications listed below meet the requirements for achieving the maximum score in the professional evaluation.

4.1 Team Leader

Tasks of the team leader

- Stakeholder Consultation with MNRE and identified SIAs and vendors
- Co-ordination between MNRE and GIZ
- Travel to selected states and location for assessment
- Presentation of key findings of the O&M issue mapping
- Overall responsibility for the Contractor's consulting packages (quality and deadlines)
- Coordination and ensuring communication with the working group, partners and other project participants
- Personnel management, in particular identification of the need for short-term assignments within the available budget as well as planning and control of assignments and support of local and international short-term professionals
- Regular and timely reporting

Qualifications of the team leader

- Education (2.1.1): Master's degree in Management/ engineering / Renewable Energy/ Solar Energy/ Sustainable Energy/ or Equivalent fields
- Language (2.1.2): Language skills on A1-Level in English and Hindi
- General work experience (2.1.3): 8 Years of professional experience in the Renewable energy sector
- Specific professional experience (2.1.4): 3 years of experience in working in DRE sector, understanding the technological, social and financial challenges **(provide 2 reference projects clearly demonstrating the experience)**
- Leadership experience/management (2.1.5): 5 Years of leadership experience as a team leader in projects or as a manager in companies
- Regional experience (2.1.6): 2 Years of experience in projects in the eastern and north eastern region
- Development Cooperation Experience (2.1.7): 3 Years of experience in development cooperation projects
- Other (2.1.8): Understanding of operation and maintenance challenges for DRE especially solar water pumps

4.2 Key Specialist 1- Solar Water Pumps Expert

Tasks of Key Specialist 1

- Review the existing PM-KUSUM solar water pump O&M requirements, technical specifications, common pump configurations and applicable standards to guide the assessment.
- Support the field assessment of O&M practices and identify key technical issues related to solar panels, pumps, controllers, wiring, water availability and other system components.
- Assess the technical skills required for local first-level O&M, including preventive maintenance, fault identification, basic troubleshooting, minor repairs and escalation of complex issues.
- Review existing solar pump O&M training programmes, curricula and technical resources and recommend suitable content for customisation based on the identified field-level needs.
- Support the development and delivery of practical training content, including demonstrations, troubleshooting exercises, checklists and simple technical guidance for local service providers.
- Provide technical inputs to the O&M assessment, training evaluation and final recommendations, including good practices, technical risks and measures to improve long-term functionality of PM-KUSUM solar pumps.

Qualifications of Key Specialist 1

- Education (2.2.1): Master's degree in Management/ engineering / Renewable Energy/ Solar Energy/ Sustainable Energy/ or Equivalent fields
- Language- English-business level
- General work experience (2.2.3): 5 Years of professional experience in the renewable energy Sector
- Specific work experience (2.2.4): 3 years of experience in working with projects related to PM KUSUM Scheme and Solar Water pumps (**provide 2 reference projects clearly demonstrating the experience**)
- Regional experience (2.2.6): 2 Years of experience in projects in the eastern and northeastern region
- Others (2.2.8): demonstrated experience for engaging stakeholders at ground level, understanding of operation and maintenance challenges solar water pumps

4.3 Key Specialist 2- Capacity Development

Tasks of Key Specialist 2

- Assess the capacity and skill needs of potential local O&M service providers based on the findings of the field assessment and consultations with vendors, State agencies and local stakeholders.
- Identify and review existing training programmes, curricula and Technical Resources (TRs) on solar pump O&M and assess their suitability for the identified needs.
- Develop standards and criteria for selecting and customising existing training resources, including content quality, technical relevance, practical learning, language and ease of use.
- Develop and customise a practical training package using suitable existing materials, including presentations, manuals, checklists, videos, demonstrations and interactive exercises in English and relevant local languages.
- Design and coordinate six training programmes in collaboration with selected PM-KUSUM vendors and relevant technical institutions, including participant selection, training methodology, practical sessions and logistics.
- Follow the gender responsive checklist to design a gender responsive training program
- Assess the effectiveness of the training through participant feedback and learning assessment, document lessons and challenges, and recommend improvements and a scale-up approach for local first-level O&M support.

Qualifications of Key Specialist 2

- Education (2.2.1): Master's degree in Management/ engineering / Renewable Energy/ Solar Energy/ Sustainable Energy/ or Equivalent fields
- Language- English-business level
- General work experience (2.2.3): 4 Years of professional experience in the renewable energy Sector
- Specific work experience (2.2.4): 3 years of experience in working with projects related to Capacity Development in remote areas **(provide 2 reference projects clearly demonstrating the experience)**
- Others (2.2.8): Designing and delivering gender responsive Capacity development program, understanding of ground level challenges in technology adoption.

Soft skills of team members

In addition to their professional qualifications, team members should also have the following qualifications:

- Ability to work in a team
- Ability to take initiative
- Communication skills
- Socio-cultural competence
- Partner- and customer-oriented, efficient action
- Interdisciplinary thinking

5 Costing requirements

5.1 Contracts for work:

The following calculation bases for the contract for work and services are a guideline value that is based on the acceptance criteria per sub-work / milestone mentioned in Chapter 2 (Tasks for contractors).

Since the contract to be concluded is a contract for work, we ask you to offer your services at a flat rate.

In addition, the price offer is also evaluated on the basis of the daily rates on which it is based. We ask you to show the daily rate on which it is based. A breakdown of the days is not necessary.

	Number of experts	Estimated no. of days	Comments
Work Package 1	3	45	
Work Package 2	3	85	
Flights	Number of experts	Number of round trips per flights experts	Comments
Flights (round trips)	3	8	Travel Sectors from base location as approved by GIZ
CO ₂ compensation for air travel	3	8	Travel Sectors from base location as approved by GIZ
Other costs	Number	Price	Comments
Flexible remuneration			A budget of 10% of contract value is foreseen for flexible remuneration. Please incorporate this budget into the price schedule. Use of the flexible remuneration item requires prior written approval from GIZ.

The estimated total level of effort for this assignment is approximately 130 expert days distributed across the milestones above. Bidders may propose their own internal allocation of expert inputs while ensuring achievement of all required deliverables. The following travel assumptions are indicative and are intended solely to assist bidders in preparing their lump-sum financial offer. The following cost must be factored

into the financial proposal (under workpackage costing) and should not be separately quoted.

Travel expenses	Number of experts	Number of days/nights per experts	Comments
Per-diem allowance in country of assignment (10 trips, 1 days per trip)	3	10 days per expert	Travel Sectors from base location as approved by GIZ $10 \times 3 = 30$
Taxi Local (10 trips, 1 night)	3	10 days per expert	Local Travel as approved by GIZ 30 days (10 trips * 3 experts)
Intercity Taxi (10 trips, 1 days)	3	10	Travel as approved by GIZ 30 days (10 trips*3 experts)
Hotel stay (10 trips, 1 nights)	3	10	Travel Sectors from base location as approved by GIZ 30 days (10 trips *1 nights* 3 experts)

All travel activities must be coordinated in advance with the person responsible for the project.

5.2 Sustainability aspects for travel

The Contractor AG is obliged to reduce greenhouse gas emissions (CO₂-emissions) caused by travel. When preparing your offer, please include options for reducing emissions, e.g. choosing the lowest-emission booking class (economy), using means of transport, airlines and flight routes with better CO₂ efficiency. For short distances, it is preferable to use the train (2nd class) or e-mobility.

CO₂ emissions caused by air travel must be compensated. For this purpose, the AG specifies a budget according to which the CO₂-compensation can be billed against proof.

6 Structure of the Bid

The structure of the bidder's bid must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should correspond to the structure of the weighted (and not zeroed) criteria of the evaluation scheme. The offer must be legible (font size 11 and larger) and written in an understandable way. The language of the offer is English.

The entire offer may not exceed 10 pages (excl. CVs). If one of the given maximum page numbers is exceeded, the content of the surplus pages will not be taken into account in the evaluation. External content (e.g. links to websites) is also not taken into account.

The CVs of personnel offered under Chapter 4 of the ToR must be written in the format indicated in the application conditions. Each CV must be limited to 4 pages each. The CVs must indicate the position and function of the proposed person in the relevant projects named and how long he or she has worked there. The CV can also be written in the language English

Please calculate your price offer exactly on the basis of the parameters mentioned under 5. There is no contractual entitlement to exhaust the full days, trips, workshops or budgets. The number of days, trips, workshops and the amount of the budgets are contractually agreed as a "up to" regulation. The specifications for pricing are stored in the price sheet.

Since the contract to be concluded is a contract for work, we ask you to offer your services at a fixed flat rate, which includes all relevant costs (fee, travel expenses, etc.). The evaluation of the price offer is based on the package price offered. In addition, we ask you to show the daily rate on which it is based. A breakdown of the days is not necessary.