

Terms of Reference (ToR)

Hiring a Service Provider for Supply, Installation, Testing and Commissioning of RO System Upgradation, Battery, CCTV & Technical Support under the CLIMB Project

Assignment Summary

Field	Details
Project	Community-Led Innovation for Climate Risk Mitigation in Bangladesh (CLIMB)
Duration	27 Sep to 30 Nov 2026
Location	Sarankhola (Bagerhat) with occasional meetings in Dhaka

About CARE

CARE is a leading global humanitarian and development organization committed to ending poverty and promoting social justice. Established in 1945, CARE currently operates in over 90 countries. CARE Bangladesh, one of the oldest country offices, has been working since 1949 and is widely recognized for its innovation, collaboration, and deep engagement with climate-vulnerable communities.

As a pioneer in community-based resilience building, CARE Bangladesh introduced more than 60 community-based adaptation models under the Reducing Vulnerability to Climate Change (RVCC) project (2002–2005)—the first large-scale intervention of its kind globally. Since then, CARE Bangladesh has maintained a strong operational presence in climate-affected regions, advancing both new and incremental adaptive approaches in line with its climate strategy and frameworks.

The organization works across the humanitarian-development-climate nexus to promote long-term resilience. It plays a key role in national efforts such as the UN's Humanitarian Coordination Task Team (HCTT) Nexus Strategy for Climate-related Disasters (2021–2025) and the National Adaptation Plan (NAP), contributing to both national and global climate commitments.

Background

The CLIMB project (Community-Led Innovations for Climate Risk Mitigation in Bangladesh) is an initiative (2022–2026) funded by DANIDA and implemented by CARE Bangladesh in partnership with Rupantar and SHED. The project operates in the south-east (Cox's Bazar) and south-west (Bagerhat) coastal regions of Bangladesh—areas highly vulnerable to climate risks.

The project aligns with the Strategic Partnership Agreement (SPA) between CARE and DANIDA, which emphasizes climate resilience and innovation as core pillars. In Bagerhat, the project is implementing the Community Water Enterprise—a community-managed and

women-led safe-water service and enterprise model addressing climate-induced salinity and shortage of potable water in coastal communities. To support reliable operation of the project facility, the project intends to install a solar power and associated electrical system.

The assignment will include supply, transportation, installation, basic configuration, testing and commissioning of the required solar, electrical and digital financial management components. The Service Provider will be responsible for delivering the system in operational condition and providing basic orientation to designated project personnel.

Objective

The objective of the assignment is to supply, install, test, and commission an upgraded RO water treatment comprising the following major components:

SL	Category	Unit Type	Quantity
1	Pre Treatment Vessel Upgradation	Package	1
2	RO Control Panel, Structure and Pipe Overhauling	Package	1
3	RO Membrane max upto 5000 TDS	Unit	4
4	Water Transfer Pump for Water Satellite Station	Unit	1
5	Water Meter	Unit	3
6	Dosing Chemical	Liter	50
7	Spare Parts for Future Use	Package	1
8	15 kWh Battery	Unit	2
9	2 CH CCTV Camera	Unit	2
10	RO Technical Training without Food	Package	1
11	Transportation, Setup, and Commission	Package	1
12	Technical Visits (September to December 2026)	Unit	8

Scope of Work

The Service Provider is expected to undertake the following tasks in alignment with the assignment objectives:

Task 1. Site Verification and Planning: visit and verify the installation location, assess site conditions, confirm equipment placement, and agree on the workplan, installation timeline, coordination arrangements, and communication protocols.

Task 2. Pre-Treatment Vessel Upgradation: check and improve existing vessels, valves, fittings, backwash system, and leakage points.

Task 3. RO Control Panel, Structure & Pipe Overhauling: check and repair control panel, wiring, protection devices, structure, pipelines, valves, and fittings.

Task 4. Supply and Installation of RO Membranes: supply and install 4 suitable RO membranes compatible with the existing system (up to 5,000 TDS).

Task 5. Supply and Installation of Water Transfer Pump and Water Meter: supply and install pump with fittings, electrical connection, and protection; along with 3 water meters at suitable locations.

Task 6. Supply of Dosing Chemical and Spare Parts: supply 50 liters of suitable RO dosing chemical and a package of basic spare parts for future maintenance.

Task 7. Supply and Installation of Battery System: supply and install 2 units of 15 kWh batteries with BMS, overcharge/over-discharge/over-current/short-circuit protection, cables, connectors, breaker/fuse, mounting; check compatibility with existing inverter.

Task 8. Supply and Installation of CCTV System: supply, install, and configure 2 CCTV cameras at suitable locations to monitor the RO system and nearby operational area.

Task 9. Transportation, Setup and Commissioning: transport, install, test, configure, and commission all equipment.

Task 10. Technical Training and Support Visit: Train operators on RO operation, maintenance, troubleshooting, chemical dosing, battery use, and safety; while providing 2 technical visits per month from September to December 2026.

Task 11. Handover Process: hand over the completed system to the client with:

- Equipment list
- Membrane and pump details
- Battery specification and warranty
- Spare parts list
- Basic operation guide
- Basic maintenance guide
- Training, testing and commissioning records.

Technical, Testing, and Support Requirements

RO System:

- Check existing system condition before starting work
- Repair leaks and damaged fittings
- Check control panel and electrical protection
- Ensure proper pump operation
- Ensure membrane compatibility
- Ensure proper flow and pressure
- Check feed water and product water TDS

Water Transfer Pump should be selected based on:

- Required flow
- Pipeline length & size

- Required pressure
- Elevation difference
- Available electrical supply

Battery System should include:

- Battery Management System (BMS)
- Overcharge protection
- Over-discharge protection
- Over-current protection
- Short-circuit protection
- Required cables and connectors
- Breaker/fuse protection
- Proper mounting

The contractor must check compatibility with the existing inverter before supply.

CCTV:

- Two cameras shall be installed at suitable locations to monitor the RO system and nearby operational area.

Testing & Commissioning:

- RO system operation
- Pump operation
- Water flow and pressure
- Pipeline leakage
- Feed water TDS
- Product water TDS
- Water meter operation
- Control panel operation
- Battery charging and discharging
- Battery-inverter connection
- CCTV operation
- Overall electrical and mechanical safety

The system shall be handed over only after successful testing.

Technical Training should cover:

- RO start and shutdown
- Pretreatment operation
- Backwashing
- Pump operation
- Chemical dosing
- Membrane protection
- Water meter reading
- Battery use and safety
- Basic troubleshooting
- Routine maintenance

- CCTV basic operation

During each Technical Support visit, the technical team should check:

- RO system performance
- Pump
- Pretreatment vessels
- Membrane
- Pipeline
- Control panel
- Water meters
- Chemical dosing
- Battery system
- CCTV
- Any reported technical problem

Key Deliverables

Deliverables	Description
Inception Report & Workplan	Site verification findings; existing RO system assessment; confirmed equipment requirements; installation methodology; detailed workplan and timeline; coordination and communication arrangements.
Upgraded Pre-Treatment System	Existing vessels, valves, fittings, backwash system and leakage points checked, repaired/upgraded and made operational.
Overhauled RO Control Panel, Structure & Piping	Control panel, wiring, protection devices, structure, pipelines, valves and fittings repaired/overhauled and tested.
Installed RO Membrane System	Supply and installation of 4 compatible RO membranes suitable for feedwater up to 5,000 TDS.
Water Transfer & Metering System	Supply and installation of 1 water transfer pump and 3 water meters, including fittings, electrical connections and protection.
Dosing Chemical & Spare Parts Package	Supply of 50 L suitable dosing chemical and a basic spare-parts package for future maintenance.
Battery Backup System	Supply and installation of 2 × 15 kWh batteries, including BMS, protection, cables, connectors, breakers/fuses and mounting; compatibility with existing inverter verified.
CCTV Monitoring System	Supply, installation and configuration of 2 CCTV cameras covering the RO system and nearby operational area.
Testing & Commissioning Report	Evidence that RO operation, pump, flow/pressure, leakage, TDS, meters, control panel, battery/inverter connection, CCTV and overall safety have been successfully tested.
Operator Training	Training on RO operation, pretreatment, backwashing, pump operation, chemical dosing, membrane protection,

	meter reading, battery safety, troubleshooting, maintenance and CCTV operation.
Technical Support Visits & Reports	2 technical visits per month from September–December 2026; assessment of RO performance, pump, membranes, piping, control panel, meters, dosing, battery, CCTV and reported technical problems.
Final Handover Package	Equipment list; membrane and pump details; battery specifications and warranty; spare-parts list; basic operation guide; maintenance guide; training record; testing and commission record; complete system handover.

Expected Timeline

The consultancy is scheduled to commence **20 September 2026**. The selected Service Provider/firm will have a maximum of **80 calendar days** from the date of the contract signing to deliver the final report to CARE, ensuring all deliverables are met satisfactorily within the agreed timeframe.

Minimum Expertise Requirement / Team Composition

The proposed Service Provider/firm should collectively demonstrate:

- At least 5 years of relevant experience in RO water treatment system installation and maintenance
- Proven track record of supply, installation, and commissioning of RO systems of similar or larger capacity
- Qualified electrical engineers/technicians in the team
- Capacity to provide after-sales support and warranty coordination
- Capacity to provide after-sales support and warranty coordination
- Experience working with NGOs, development projects, or similar institutional clients in Bangladesh
- Ability to mobilize and complete work at remote/coastal locations

Evaluation Criteria

Criteria	Weight
1. Financial Proposal	20%
2. Technical Proposal	80%
2.1 Understanding of the assignment and technical specifications (methodology, context specific solutions, sustainability and environmental consideration)	20
2.2 Practicality of task-delivery approach and workplan	20
2.3 Relevant experience in RO water system management. Proof of Work	15

<i>Order/completion certificate required. (Minimum 3 experience will get Score 3. 5 or above will get 15)</i>	
<i>2.4 Proposed team composition and equipment quality</i>	15
<i>2.5 After delivery support and warranty arrangement</i>	10
Total	100

Application Process

If you are interested and feel competent to carry out this very exciting work, please submit technical and financial proposals in two separate documents:

Technical Proposal:

1. The technical proposal should be concise and should not exceed 15 pages, excluding CVs and work samples.
2. Detailed technical-narrative proposal with brief approach to delivering each task, clearly outlined design, timeline, level of effort of each member of the consulting firm and tools to be employed.
3. All technical details and specifications must be clearly mentioned for future verification.
4. Resume of core team members with organizational profile including previous/ongoing client lists.
5. Set of documents mentioned in the Technical Evaluation Criteria.
6. Others as per ToR.

Financial Proposal:

1. Filled up Financial Proposal that outlines the fees and associated costs including govt. circulated VAT & TAX and provide budget notes.

Terms and Conditions for Service Provider

- CARE Bangladesh reserves the right to preserves right to cancel/terminate/halt this hiring process without showing any justification to the bidder though they have given time and resources to submission of proposal.
- Message to be carried by the production has to be approved by CARE Bangladesh.
- CARE Bangladesh reserves the right to monitor the quality and progress of the work during the assignment. [etc.]

Mode of Payment

Payment will be made through account payee cheque/cash as per the mentioned allocation after the completion of full assignment and duly certified by the project.

Terms of Payment

The Service Provider will be paid as per the following schedule

PAYMENT MATRIX		
Deliverables	Measuring Criterion/ Indicator	% on total Purchase Value
Inception Report	Initial deliverables endorsed by program	40%
Initial performance and market-readiness assessment, communication package, stakeholder profiles and completion of minimum meetings, and stakeholder feedback and model modification report	Deliverables and report endorsed by program	40%
Final Process Report; and complete handover of all editable files	Final deliverables endorsed by CARE Bangladesh	20%

Payments in local currency will be paid as per standard procedure. Service provider shall provide CARE Bangladesh with periodic and final invoice statements indicating Services performed, expenses incurred, past payments made and any other information CARE Bangladesh shall reasonably request. service provider shall provide a final invoice statement whenever requested by CARE Bangladesh up to sixty (60) days after the date set for the completion of the Services in this SOW.

CARE Standard Payment Terms are 30 days from receipt of goods or service and accurate & complete invoice acceptable to CARE Bangladesh.

Penalty

If the service provider fails to provide services of any or all of the contract within the period(s) specified in the Contract / Purchase Order, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price / Purchase Order amount, as penalty, a sum equivalent to the percentage stated below:

Total Delay Penalty (% of Contract/PO Value)	
First 5 days	2%
From 6–11 days	4%
From 12–20 days	6%
Above 20 days delay	The termination clause may also be applicable

**Deduction of the penalty amount will not be applicable in case if any extended completion time/ period is officially agreed and accepted by CARE Bangladesh after the completion date mentioned in PO.

Intellectual Property

CARE Bangladesh's copyrights are reserved for every data set, report, and strategy documents generated by the Service Provider during the consultancy period for the said purpose. The Service Provider may not share these documents or use the evidence without informing with CARE Bangladesh in written.

Risk Management and Contingency Planning

The Service Provider must proactively manage risks such as political unrest, natural hazards, or disruptions. A contingency plan should be integrated into the work plan to ensure continuity and quality of deliverables.

Key Contact Information

Shahab Uddin, Knowledge Management and Learning Coordinator, Humanitarian and Resilient Futures Program, CARE Bangladesh.