

Terms of Reference for Solar Irrigation Pumps Installation in Jashore district and Continue after Sell Services

1. Introduction and background:

Heifer International began working in Bangladesh in 2012 and aims to reach 400,000 smallholder farmers by FY2030. In Bangladesh promotes beef, goat, dairy and vegetable value chains. The programmatic approach focuses on quality production and productivity, promoting people, profit and the planet and building market linkages to support smallholder farmers to expand their business and achieve a sustainable living income.

With Heifer's support, Self-Help Groups (SHGs) have successfully organized into cooperatives and farmer-owned agribusinesses. These structures enable farmers to access affordable inputs, technical and financial services, product aggregation, and improved marketing opportunities. They also provide capacity building in leadership, financial management, organizational development, conflict resolution, and negotiation skills—empowering members to access broader markets. Building on these achievements and lessons learned, Heifer Bangladesh plans to expand its program in the Jashore region, specifically targeting the vegetable and flower subsectors to help farmers reach the living income benchmark.

In Jashore, many farmers still face constraints in accessing markets, quality resources, and essential services required to scale their farming activities. Limited availability of quality inputs and modern agricultural technologies continues to restrict production and income. Irrigation, a critical input for vegetable and flower cultivation, remains inadequate and unreliable for many farmers.

To address these challenges, Heifer International Bangladesh has launched the Strengthening Climate-Smart Vegetable and Flower Value Chain (C4VFVC) Project. Over the next five years, the project will support farmers by installing solar-powered irrigation pumps and promoting climate-smart technologies to strengthen the vegetable and flower value chains. The project is being implemented in partnership with Jagorani Chakra Foundation (JCF) and Rural Reconstruction Foundation (RRF).

RRF is committed to the comprehensive development of underprivileged women, men, marginal farmers, young people and children leading to a civil society that respects full democracy, liberty, equality, justice, peace and solidarity. RRF is strongly committed to a holistic approach to its work. This helps to ensure the genuine development of communities through people's active participation in the process of planning, decision making and implementation.

2. Objectives of the ToR:

The broad objective of this ToR is to install the solar irrigation pump in farmers' field in Jashore district considering the assessment of soil water table for better performance of the irrigation water for vegetables and flowers cultivation. Specific objectives are -

1. To assess the soil ground water table in Chaugacha and Jikarghacha upazilla for installation the solar irrigation pumps

2. To install the solar irrigation pumps in farmers field, based on the findings of soil ground water table
3. To ensure the after-sell services for installed solar irrigation pumps
4. To get final report after installation of solar pump from selected vendor for RRF and Heifer International Bangladesh timely by analysing of each ground water table, utilized all accessories specification of solar pumps, branding, guarantee and process of after sell services.

3. Scope of Work:

The Heifer International Bangladesh has been started a project on “sustainable agriculture program to achieve living income of rural producers in Jashore district of Bangladesh” to achieve living income benchmark for 12000 farmers through enhancing social capital, strengthening the agro based knowledge and installation of solar irrigation. A team of Heifer International Bangladesh and two project implementing partners such as JCF and RRF will present in Jashore district, and they will engage to provide the necessary supports and monitoring the total process.

Support and monitor the solar pump installation system from JCF, RRF and Heifer International Bangladesh

1. Area selection with the support of Upazila Irrigation Committee (UIC) for pump installation. The areas and exact locations list will provide by RRF to the company.
2. RRF will provide pump owner/cooperative list with necessary documents to Company.
3. Landowner for installation the solar pump will provide by the RRF.
4. Underground irrigation distribution channel setting landowner list provide by RRF.
5. RRF will organize and mobilize farmers and information disseminate to company.
6. Heifer/RRF coordinate with company for local office and head office

Working area and locations

Under this ToR all activities implement the Chaugacha and Jikarghasa upazilla under Jashore district. The name of the proposed upazila and unions of are listed below. Exact locations of the activities under the listed unions will be finalized after visiting and feasibility study by the company team.

District	Upazilla	Unions
Jashore	Jikarghasa	
	Chaugacha	

Specification and branding name of solar irrigation pump accessories/equipment's

SL No	Items Description	Technical specification	Brand	
1	PV Module	580/550 Wp OR hire, Total Capacity: 8.7 KWP, (Up to 15 pcs panel)	Tier-1 standard- Jinko Solar, Trina Solar, JA Solar, Canadian Solar.	
2	Submergible Pump, Motor & Controller	Pump Capacity: 5.5KW / 7.5 HP, Discharge & Head: 60 m ³ /h & 20 Meter. Protection Level: IP68 Inverter Capacity: 7.5 kW or above Protection Level: IP65 With a Remote Monitoring Device. Country of origin, Italy, Germany, India. Bangladesh,	Lorentz, Grundfos, Kirloskar , Veichi, Shakti pump equivalent, Standard with the best service guarantee, Smart monitoring module. with QC	
3	Boring & Related Works	Length: (180-220) Rft Housing: 8"/100 Rft	RFL /N poly/equivalent	
4	Water Delivery and filter	Filter: 6" / 70-80 (Rft with necessary fittings) Delivery Pipe: 4" /5" (connect to tank)	RFL /N poly/equivalent	
5	Module Mounting Structure	Civil works CC basement with short column, footing, anchor bolt, structure with pole and angle. hot deep galvanise.	Standard with QC	
6	Cable & Accessories	As required	BRB, BBS, RR, Poly Cable	
7	Header Tank	1 Nos, 900 mm dia, 10 feet or up height.	Standard with QC	
8	Buried Pipe	Dia: 5"/1200 Rft or 6"/1200 Rft, Raiser Outlet: 6 Nos, Gas pipe: 06 Nos, With a raiser valve of good quality.	RFL /N poly/ equivalent	
9	Pump House	1 Nos 7X8 feet house, foundation 4 feet depth, (2 feet up Floor level, Height 10 feet, and RCC floor slab 6 inches, roof RCC 5 inches) with maintenance hole, Door 22 g, window 24 g, galvanised iron pipe 8' diameter capped with flange, locked and bolting arrangement with well protection, good colour finishing. 5/6 fit in ranch (fencing to pump room gate) OR our new design as the same only total panel up to roof setup, with 2 extra columns and a cross beam. OR (Steel structure also provides an estimate for cross Veeam) provide design drawing	Standard with QC	
10	Fencing	RCC Piller: (06X06 Inch)-20 Pcs with 4"GI Squire Net.	Standard with QC	
11	Lightening Protection System	Earthing Boring: 30 Feet, 6 SWG Copper Wire: 30Feet, 1X2.5 rm Green Cable: 20 Feet, Air Terminal Lightning System: 01 Set with SPD (Surge Protection Device)	Copper tech / similar brand	
12	Solar Home System	Solar Panel 100 Wp	1 Pcs	Solar standard guaranty, with qc Battery; Dinging, Volvo, Hamko, Rimso battery rack with Qc
		Solar Battery 12V/ 60Ah	1 Pcs	
		Battery Rack	1 Pcs	
		Solar Charge Controller 12V/10 A	1 Pcs	
		Solar DC Light 12 V/ 5Watt	1 Pcs	
		Solar DC Light 12 V/18Watt	1 Pcs	
		DC Switch	2 Pcs	

		Light Holder	2	Pcs	
		2X23/76 Cable	10	Mtr	
		2X70/76 Cable	5	Mtr	
		Royal Plug & Screw	1	Lot	
		Structure	1	Set	
13	CC Camera Setup	Cruiser SE+ 2 MP CC Camera	2	Set	Imou, hikvision, campro, Avtech, Dahua
		64 GB SD Card	2	Set	
		DC 12 V to 12 V Converter	2	Set	
		Camera Case	2	Set	
		Cable	2	Lot	
	Total Amount				
	Add VAT				
	Grand Total (Including VAT & Tax)				

Obligation and Deliverable for the selected vendor:

1. Submit a pre-assessment report by analyzing the groundwater table in the Jashore district.
2. Provide the solar irrigation pump accessories/equipment's branding name, guarantee and quality.
3. Timely assemble in place of solar irrigation pump's accessories/equipment.
4. Based on groundwater table, ensure boring the soil for each pump. An average of 180-200 feet will bore the soil plus and minus will be specified based on the water table.
5. 7.5 hp submersible solar irrigation pump is in place.
6. Underground 1200 fit water distribution channels are in place.
7. As measurement 7.5 hp solar pump, the required watt/kw of world-class solar panels will ensure as Bangladesh standard sunlight energy which meets the engineering standard.
8. A structure for setting the solar panels for each pump is in place as specification.
9. A structure for pumps and other accessories/equipment for security is in place as a specification
10. Introduce with company local near office branches for communication as an urgent need.
11. The selected vendor will be assigned one person for communication at the Dhaka level.
12. Follow the company warranty/guarantee for all accessories and equipment.
13. Quotation has to be provided in standard format as given below.

Additional Requirements:

- Have experience 5 years working with governments like IDCOL/BADC/BREB and private-sector farmers.
- Solar site pre visit for proper structure development work.
- Commitment to after-sell services (pump repairing, technical and awareness)
- Provide structure and design for pump room and panel.
- Deploy the assignment of an expert site engineer.

Period of Assignment:

The solar irrigation pump installation has to start from November 2025 and have to complete installation of 7 solar pumps within 3 months which effective from after signing of contract/MoU. It may delay for full filling the government rolls and regulations. It is mentioned that the selected vendor has to continue after-sell service till to June 2027 to run the pump smoothly.

Mode of Payment:

1. Advance/Cash Payment: Advance Payment will not be allowed before deliverable work/service/goods/technical services etc.
2. Payment mode: RRF will make payment through cheque/BEFTN/RTGS/DD to the respective vendor after receiving the delivery challan and invoice.
3. Installment Payment:
 - First 20% of payment of total the contract amount after completing/delivering up to 30% task.
 - Second 40% of payment of total the contract amount after completing/delivering up to 70% task.
 - Third 30% of payment of total the contract amount after completing/delivering up to 100% task.
 - Final 10% payment of total the contract after 3 (three) month later.
 - VAT & Tax: VAT & TAX should be deducted at source as per government rules.

Quotation submission Standard Format

SL No	Items Description	Technical Specification		
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		Brand	Technical Specification	Price
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			64 GB SD Card	2	Set	
			DC 12 V to 12 V Converter	2	Set	
			Camera Case	2	Set	
			Cable	2	Lot	

Working plan:

Duration for all the activities under this ToR will be 4 months. During this period activities will be organized as the following work plan –

SI #	Name of activities	Dec 2025	Jan 2026	Feb 2026	March 2026	April 2026
A.						
	Agreement/MoU Complete					
	Permission from Upazilla Irrigation Committee					
	Pump accessories specification and branding					
	Ground water table information report					
	Assemble the accessories and equipment					
	Boring the soil and pump installation					
	Structure built for setting solar panels					
	Structure for the pump security					
	Submit the completion report					
	After sell service					
B.	JCF, RRF and Heifer International Bangladesh					
	Area and location selection					
	Landowner for installation the pump					
	List of farmers for setting the water distribution channel					
	Monitor the process					

General Terms and Conditions:

1. RRF reserves the right to accept or reject any quotation without giving any verbal and/or written rationale
2. RRF and Heifer Bangladesh and its representatives reserve the right to monitor the quality and

progress of the work during the assignment.

3. Legal document: Legal Document: You need to submit a quotation or financial proposal including legal documents (eg: BIN, TIN, Proof of Submission of Return (PSR), Bank Solvency Certificate, trade license Company registration/dealership documents, relevant working experience, Bill of Entry (if any) and environmental certificate (if any).

Penalties:

As per the Implementing partner (RRF) organizational procurement policy

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