

INVITATION TO TENDER FOR THE SUPPLY & INSTALLATION OF SOLAR POWERED IRRIGATION DEMO AND ESTABLISHMENT OF DEMO PLOTS

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) intends to tender for the Supply & Installation of Solar Powered Irrigation Demo and Establishment of Demo Plots

The GIZ Office Accra now invites tenderers to submit, free of charge and without obligation on the part of GIZ, a tender based on the following terms and conditions. Non-conformity with all conditions mentioned could lead to the exclusion of the bid.

Tenders should be valid for a period of **three (3) months** after the deadline of Tender submission.

Prices shall be fixed. Prices shall be free of VAT and other public charges. Prices shall be quoted in Ghana Cedis.

All interested suppliers are required to submit **a letter, a company profile, and their quotes** according to the specifications below, to the GIZ Office Accra.

LOT 1

No	Item	Unit of Measure	Description/Specification	Qty
1.	3 HP solar surface pump with solar panel and electricals	Set	<p>A. Pump and Motor Specifications</p> <ul style="list-style-type: none"> • Motor Capacity: 3 HP (2.2 kW) • Pump Type: Surface • Operating Voltage: Typically 220V/380V AC • Max Head (Total Lift): 30 to 150 meters (depending on the specific impeller stage) • Discharge Rate: 3,000 to 19,000 Liters Per Hour (LPH) • Material: 304 Stainless Steel pump body with brass or stainless-steel impeller. <p>B. Solar Array Requirements</p> <ul style="list-style-type: none"> • Total Capacity: 3,000 Watts to 3,700 Watts peak • Panel Configuration: Typically, 10 to 12 panels rated at 300W-350W each (or fewer 500W+ panels) • Mounting Structure: Hot-dip galvanized steel, manual tracker or fixed tilt (usually adjusted seasonally at 15° to 30°). <p>C. Electricals and Fittings</p> <ul style="list-style-type: none"> • MPPT Controller / VFD (Variable Frequency Drive): Converts and optimizes solar DC power to drive the pump motor. Must include MPPT (Maximum Power Point Tracking) for maximum solar yield • Protections: Dry run protection, over-current, over-voltage, and lightning/surge protection • Sensors: water level sensor (low-water cutoff) • Cables: Submersible drop cable (water-proof, copper) and solar PV array cable. Sizing depends on distance from panels to the well (usually 4mm² to 6mm² for DC strings) • Fittings & Accessories: DC Disconnect switch, MC4 connectors, and a waterproof splice kit for wire joining. <p>D. Mechanical & Plumbing Fittings</p> <ul style="list-style-type: none"> • Column Pipe: HDPE (PE100) or uPVC pipes with a minimum pressure rating of 8 kg/cm² • Pipe Diameter: 1.25 inches to 2 inches (depending on flow requirements) <p>Accessories: Safety rope (stainless steel or nylon), well seal/cap, and pipe clamps</p>	5
2.	Drip irrigation system	Set	<p>A. Core System Specifications</p> <ul style="list-style-type: none"> • Drip Lines / Tapes: 16mm diameter with emitter spacings of 30cm (for closely spaced crops like onions or vegetables) or 40-60cm (for wider row crops like tomatoes or peppers) • Operating Pressure: 15 to 25 PSI (pressure-compensating drip lines are highly recommended). • Filtration: 120-mesh screen or disc filter. This prevents sediment from clogging the small emitters. <p>B. Standard Material Bill of Quantities (BOQ)</p> <ul style="list-style-type: none"> • Mainline & Sub-main Pipes: ~200 to 250 meters of 63mm (2.5-inch) HDPE or PVC pipes to distribute water from the source. • Drip Tape / Tubing: 6 rolls (3,000m) of 16mm drip tubing. • Valves: Eight to ten 32mm to 50mm gate/ball valves. You must divide the one-acre plot into 4 to 6 irrigation zones so your water source can provide adequate pressure at any given time. • Fittings & Connectors: • Starter connectors (to attach drip lines to the main/sub-main pipes). • End caps/plugs (to seal the ends of the pipes and lateral lines). • Rubber grommets/washers (to prevent leaks at pipe connection points). • Tees and elbows for plumbing corners. 	15000m

3.	Micro sprinklers tape	Set	<p>A. Micro Sprinklers Tape Specifications</p> <ul style="list-style-type: none"> • Tape Diameter: 16mm or 19mm • Tape length: 3000m • Tape Thickness: 0.2mm to 0.4mm (8 to 16 mil). • Hole Spacing: Holes placed every 30cm. • Spray Pattern: Wide-angle, flat, or misting spray (typically creates a wet radius of 2 to 4 meters). • Operating Pressure: Low pressure (typically 0.5 to 1.5 Bar / 8 to 22 PSI) <p>B. Essential Fittings & Hardware (for 1 Acre)</p> <ul style="list-style-type: none"> • Start Connectors / Take-off valves: 100 pieces (to connect the tape to the sub-main). • End Caps / Clamps: 100 pieces (to seal the ends of the tape lines). 	15000m
4.	P.E. irrigation pipes	Set	<p>A. Mainline Pipes (Sub-mains)</p> <ul style="list-style-type: none"> • Material: High-Density Polyethylene (HDPE) • Diameter: 63mm • Pressure rating: PN 6 to PN 10 <p>Length: 200m</p>	1000m
5.	Chain link and metal poles for fencing	Set	<p>A. Fence Specifications & Post Sizes</p> <ul style="list-style-type: none"> • Chain Link Fabric: 9 to 11-gauge steel wire. Mesh size should be 2 inches (50 mm). • Length: 254m • Line Posts: 1.875 to 2.375 inches outside diameter (O.D.). These should be galvanized schedule 40 steel. • Terminal (Corner/End) Posts: 2.875 to 3.5 inches • Top Rail: 1.625 inches O.D. tubing running continuously along the top of the fence. 	1270m
6.	Delivery and Installation Cost	-	<ul style="list-style-type: none"> • Delivery and Transportation cost. • Installation to be done and covers the following districts; Lambussie, Nandom, Lawra, Wa West, STK 	

LOT 2

No	Item	Unit of Measure	Description/Specification	Qty
1.	Knap-sack	unit	<p>Capacity: 16L</p> <p>Material: Chemical resistant plastic</p> <p>Pressure: 3-4.5bar</p> <p>Spray nozzle: Adjustable nozzle allowing a change from fine mist to a direct/focused jet.</p> <p>Ergonomics: Padded shoulder straps/harness for comfort.</p> <p>Weight: 2.5 to 3.5Kg empty</p>	39
2.	Push planters	unit	<p>Seed capacity: 1.5-4 Kg per container</p> <p>Number of Nozzles: 2 to 12</p> <p>Seeds per drop: Adjustable to 1 to 3 seeds per drop</p> <p>Plant spacing: Adjustable to 15cm, 25cm or 30cm</p> <p>Planting depth: Adjustable ranging from 3 to 10cm</p> <p>Weight: Approximately 8-27Kg</p> <p>Construction: Typically, steel and ABS plastic, with stainless steel "duckbill" nozzles.</p> <p>Features: Transparent shell for monitoring seed levels, built-in suppression wheel for soil covering.</p>	18
3.	Tarpaulin	unit	<p>Material: PVC or HDPE</p> <p>Weight/density: 450-650g/m²</p> <p>Thickness: 0.4mm-0.5mm</p> <p>Features: Waterproof, UV resistance, tear-resistant, reinforced edges (rope-reinforced hems).</p>	32
4.	Sacks	unit	<p>Material: 100% Virgin Polypropylene (PP) or recycled PP.</p> <p>Size: 50Kg</p> <p>Weight/GSM: 55g-100g per square meter</p> <p>Features: UV-treated.</p>	1728
5.	Mist blower	set	<p>Engine type: 2-stroke petrol engine</p> <p>Power: 2.13 kW to 3.0 kW (2.9 HP to 4.1 HP)</p> <p>Tank Capacity: 12-14 liters</p> <p>Spray Range: Horizontal reach of 12-13 meters, with effective vertical coverage for tall crops.</p> <p>Weight: Approximately 9.6 kg - 11 kg dry weight.</p> <p>Output: Liquid solution output over 2.5 L/min.</p> <p>Features: Padded straps, vibration absorption, and adjustable spraying nozzles.</p>	7

6.	Tomatoes seeds	g	Variety: Padma F1/Vizela F1	300
	Okra seeds	g	Variety: Maha F1/Kijani F1	2500
	Cabbage seeds	g	Variety: Pakse F1/Oselos/ Copenhagen/Tropical King/ KK Cross.	150
	Pepper seeds	g	Variety: Chilli Pepper Super F1/Piquante Yellow F1 / Simbad F1	150
	Onion seeds	g	Variety: Padma F1/Vizela F1	1500
7.	Seeds (Soya)	Kg	Variety: Jenguma/Afayak	360
8.	Seeds (Rice)	Kg	Variety: Agra	420
9.	Inoculant	g	Active Ingredient: <i>Bradyrhizobium japonicum</i>	2000
10.	Neem oil	L	Purity: 100% cold-pressed neem seed oil Composition: 100% Pure, Unrefined, Organic (no added solvents or fillers)	460
11.	Neem cake	Kg	Moisture Content: NMT (Not More Than) 10% Form: fine powder	19320
12.	NPK	Kg	Formula: 15:15:15	3900
13.	Urea	Kg	Formula: 46-0-0	1050
14.	Triple Super Phosphate	Kg	Formula: 0-46-0	700
15.	Sulfate of Potassium	Kg	Formula: 0-0-50 or 0-0-51	350
16.	Delivery Cost	-	Covers the cost of delivery or Transportation to Wa.	1

How to apply

Bidders are required to submit Two Copies of the following documents in one envelope to the below address:

- Signed Letter of Bid and Company Profile
- Priced Quotation (to the Required Specification)
- Valid Tax Clearance Certificate
- Business Registration Certificate
- VAT Registration Certificate
- Valid SSNIT Clearance Certificate
- Declaration of Business Ownership by General Manager (3) or (Inclusion of Form A for Sole Proprietorship or Form 3 for Limited Liability)

PLEASE NOTE:

THE CURRENCY OF YOUR OFFER SHOULD BE IN GHANA CEDIS

ALL PROSPECTIVE BIDDERS ARE REQUIRED TO PERFORM THEIR TAX OBLIGATIONS IN GHANA.

Tender documents should be clearly sealed and clearly marked separately for each Lot as:

Tenders Number: LOT 1 / 7000007394 / G-011500-004 / "Solar Powered Irrigation Demo"

Tenders Number: LOT 2 / 7000011798 / G-011500-004/ "Demo Field Establishment"

Submit to the following address:

The Procurement Unit,
GIZ Ghana Country Office
No. 7 Volta Street, Airport Residential Area, Accra
P.O. Box KA 9698,
Accra

To All Bidders:

- ❖ Bids must be submitted at the GIZ Ghana Country Office Reception.
- ❖ The deadline for submission is **15th June 2026** until **11:59 PM**.
- ❖ Documents should be submitted as early as possible before the deadline.
- ❖ Should the reception be closed, documents might exceptionally be dropped off at the guard's booth.
- ❖ The guards need to be told by the person submitting the documents that they are submitting tender documents.
- ❖ Always send a receipt with your documents stating the **Tender Number**.

This receipt will be signed by the receptionist or a guard (in case of exceptional drop-off at the guard's booth) to provide the bidder with proof of submission.

Please note that participating in a GIZ tendering process is free of charge for bidders.

At no phase of the process is the bidder required to make any payment to GIZ or to one of its employees.

Kindly Note by sending in your offer, you are agreeing to the **GIZ General Terms** and giving us consent to process your company data

ONLY SHORTLISTED FIRMS WILL BE CONTACTED