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Standard Shopping Document for Procurement of Works

February 2023

Forward

This Standard Shopping Document for Procurement of Works has been prepared for use in contracts financed by the Islamic Development Bank to be used for the procurement of Works through the Shopping method for contracts that are financed in whole or in part by the Islamic Development Bank. They are consistent with the Guidelines for Procurement of Goods, Works and related services under Islamic Development Bank Project Financing, (April 2019 edition, amended from time to time).

To obtain further information on procurement under Islamic Development Bank-assisted projects or for question regarding the use of this SBD, contact:

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REQUEST FOR QUOTATION (RFQW)

Project Title: Rapid Emergency Response for Displaced Populations in Sudan – Aid Point Boreholes Implementation

Contract Ref: AD/OC/RFQ/001

Date of Issue of Request: 8 November 2026

To: _____

Sir/Madam:

1. The Aid Point Organization (*Employer*) hereby requests you to submit a quotation for the following works:

Geophysical survey, drilling, construction, development and testing of thirty-two (32) solar-powered boreholes, including supply, installation and commissioning of solar pumping systems, elevated water storage, water distribution points and associated protection works, in Northern, Khartoum and White Nile States, divided into three (3) Lots as detailed in Section 1 (Technical Specifications and Schedule of Locations) and Annex 2 (Bill of Quantities).

Please note, however, that a firm which has been associated with the firm that prepared the design, or specifications, or engaged in the preparation of the Project, or a firm that will provide supervision of the Works for the Employer, shall not be eligible for the execution of the Works.

To assist in the preparation of your price quotation, the necessary specifications, bill of quantities, schedule of locations and the form for submitting the quotation are enclosed. The Form of Contract will be completed with, and signed by, the successful bidder following award (see Paragraph 11). You are advised to visit the site of the works at your own expense, and obtain necessary information for preparing your quotation.

2. Your Price Quotation, including the Form of Quotation and all required supporting documents, shall be submitted electronically as one complete signed PDF file. The electronic PDF submitted by email shall constitute the bidder's official quotation.

3. Your quotation in the attached format should be signed and submitted by email to the following address: tender@aidpoint.org. Quotations will be received in a dedicated procurement mailbox administered by a designated focal point who shall not take part in the evaluation of quotations.

4. You must have experience as a prime contractor in the construction of at least one work of the nature and complexity equivalent to the works included in this Request for Quotation over the last three years as evidenced by a client's certificate of completion, and provide evidence of availability of financial resources to complete the works in the amount of not less than the total amount of the bidder's own quotation for the Lot(s) bid, demonstrated through bank statements for the last six (6) months and/or a

bank letter confirming an available credit line (or a combination of both). Otherwise, your offer will not be considered further.

5. You shall submit only one quotation, which may cover one, more than one or all Lots. Your quotation must be typed or written in indelible ink and shall be signed by you or your authorized representative. Without a signature in your Form of Quotation, your quotation will not be considered further.

6. In evaluating the quotations, the Employer will adjust for any arithmetical errors as follows:

(a) Where there is a discrepancy between amounts in figures and in words, the amount in words will govern;

(b) where is a discrepancy between the total price in the Priced Activity Schedule (or Bill of Quantities) or the quoted amount indicated in the Form of Quotation, the total price in the Priced Activity Schedule (or Bill of Quantities) shall govern;

(c) where is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern; and

(d) if you refuse to accept the correction, your quotation will be rejected.

7. Your quotation shall be valid for a **period of thirty (30) days from 24 November 2026** (deadline for submission of the quotation).

8. Your quotation, written in the English language, shall be for the whole works of each Lot quoted and based on the unit and total prices indicated in the filled-in Bill of Quantities. :The currency of quoted prices and payment shall be United States Dollars (USD) only; quotations in any other currency will not be accepted. The quotation shall include all duties, local taxes and other levies payable by the Contractor in accordance with the local laws.

9. The Employer will evaluate and award each Lot separately. For each Lot, the contract will be awarded to the Contractor whose quotation has been determined to be substantially responsive to this Request for Quotation and who has offered the lowest evaluated price for that Lot. A bidder may be awarded one, more than one, or all Lots, subject to meeting the requirements for each Lot. A quotation is not substantially responsive if it contains material deviations or reservations to the terms, conditions, and specifications in this Request for Quotation, and it will not be considered further.

10. If you withdraw your quotation during the validity period and/or refuse to accept the award of a contract when and if awarded subject to paragraph 7 above, then you will be excluded from the list of contractors for the project for two years.

11. The contract will be governed by the terms and conditions of the IsDB Standard Form of Contract for Shopping (Works). The Form of Contract is available to bidders on request; it will be completed with the successful bidder's details and accepted prices and signed following award. A blank copy is available to bidders on request.

12. Your quotation, including Form of Quotation and filled-in Annex 2 "Bill of Quantities" should be submitted by e-mail to tender@aidpoint.org by 24 November 2026, 4:00 PM (Sudan time). Quotations will

be opened by the evaluation committee only after the submission deadline, and a record of all quotations received will be prepared and kept on file.

13. The bidder whose quotation has been accepted will be notified of the award of contract through the Letter of Acceptance issued by the Employer within 14 days from the date of submission of quotation.

14. The Employer intends to apply funds from the Islamic Development Bank (IsDB) for eligible payments under the Contract resulting from this Request for Quotations.

15. Under IsDB's Anti-Corruption Policy, bidders shall observe the highest standard of ethics during the procurement and execution of such contracts. IsDB will reject a proposal for award, and will impose sanctions on parties involved, if it determines that the bidder recommended for award or any other party has engaged in corrupt or fraudulent practices in competing for, or in executing, the Contract as specified in the Guidelines for Procurement of Goods, Works and related Services under Islamic Development Bank Project Financing (April 2019 edition, amended from time to time). At the time of submission of your quotation, you should not be on IsDB's sanctions list.

16. Please be informed of IsDB's policy on Procurement Related Complaints as stipulated in the above-mentioned Guidelines (Annex B).

17. Please confirm by e-mail the receipt of this request and whether or not you will submit the price quotation(s).

18. Any requests for clarification or questions regarding this Request for Quotation must be submitted in writing no later than 11 November 2026. Questions received after this date may not be answered by the submission deadline.

Sincerely,

_____

(Employer)

SUBMISSION AND EVALUATION REQUIREMENTS

A. MANNER OF SUBMISSION

Deadline	24 November 2026, 4:00 PM (Sudan Time)
Submission method	Electronic submission by email
Submission address/email	tender@aidpoint.org
Subject line	Geophysical Survey, Drilling and Construction of 32 Solar-Powered Boreholes with Water Storage and Distribution Systems in Khartoum, White Nile and Northern States – Lot [No.] – [Bidder's name]
Quotation validity	30 days from the submission deadline
Language	English
Currency	USD

B. EVALUATION CRITERIA

Bids will be evaluated against the following criteria. All requirements are mandatory and will be assessed on a Pass/Fail basis. In line with the IsDB Shopping method, no merit-point (rating) system will be applied: quotations that meet all the requirements below will be compared on evaluated price only.

Evaluation Criteria	Corresponding Submission Requirement	Evaluation Method
Completed and signed quotation	Completed and duly signed Form of Quotation	Pass/Fail
Completed financial offer	Completed and priced BOQ.	Pass/Fail
Legal registration	Valid company/business registration, valid tax registration certificate, and a valid licence/registration for borehole drilling works issued by the competent water authority (State Water Corporation / Groundwater and Wadis Directorate)	Pass/Fail
Relevant experience	Evidence of at least one contract of a nature and complexity equivalent to the works under this RFQ (drilling and completion of production boreholes of not less than 150 m depth) completed as prime contractor within the last three years, supported by a client completion certificate	Pass/Fail
Financial capacity	Bank statements for the last six (6) months and/or a bank letter confirming an available credit line, demonstrating available financial resources not less than the bidder's own quoted amount for the Lot(s) bid, as required under Paragraph 4	Pass/Fail
Technical methodology and work plan	A technically responsive methodology and work plan covering geophysical surveying, drilling and borehole construction, testing, solar pumping, storage and distribution, quality control, health and safety, the proposed PV array and pump sizing approach, and a completion schedule not exceeding five (5) months from contract signature.	Pass/Fail
Equipment availability	Evidence of ownership or lease of, as a minimum for each Lot bid: (i) resistivity/VES meter; (ii) drilling rig capable of drilling to at least 250 m and reaming to 14¾"; (iii) high-pressure air compressor adequate for development at the design depth; (iv) test-pumping unit with	Pass/Fail

	generator, flow meter and electric water-level dipper; (v) support truck/water bowser	
Key technical personnel	CVs of: hydrogeologist/geophysicist (BSc, minimum 5 years' borehole siting experience); drilling engineer/supervisor (minimum 5 years); solar PV/electrical engineer (minimum 3 years in solar water pumping); and a health and safety focal person	Pass/Fail
Solar-system experience and capacity	Evidence of completing at least one comparable solar-powered water-pumping installation, supported by a contract, purchase order, completion certificate or client reference. The bidder must also provide details of the proposed system, installation approach and commissioning arrangements	Pass/Fail

C. FINANCIAL EVALUATION AND AWARD

Only quotations that pass all evaluation criteria in Section B will proceed to financial evaluation.
For each Lot, AIDPOINT will check and correct arithmetical errors in accordance with Paragraph 6 of this RFQ and determine the evaluated price of each substantially responsive quotation.
Award will be made to the whole Lot to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated price.

D. PROCUREMENT SCHEDULE

Date	Activity
8th November 2026	RFQ issued.
11th November 2026	Questions concerning the RFQ and project to be emailed to tender@aidpoint.org no later than 4:00 PM (Sudan time).
16th November 2026	Answers to questions will be made available to all bidders.
24th November 2026	Quotations are due no later than 4:00 PM (Sudan time). Late submissions may not be accepted.
8th December 2026	Notification of award to successful bidder(s) through the Letter of Acceptance (within 14 days of the quotation submission deadline).
24th December 2026	Estimated project commencement date.

SECTION 1 – TECHNICAL SPECIFICATIONS

1. General Compliance

All works shall be carried out in accordance with the applicable BOQ, these Specifications, approved drawings where applicable, and AIDPOINT's written instructions. All materials and equipment shall be new, unused, and of the required quality.

2. Geophysical Survey and Drilling

The Contractor shall conduct the required geophysical/VES survey and submit the results, proposed drilling location, and recommended depth to AIDPOINT. Drilling shall commence only after AIDPOINT's written approval. Borehole drilling, construction, development, and testing shall comply with the applicable BOQ.

2.1 Geophysical survey: at each site the Contractor shall carry out a hydrogeological desk review and a vertical electrical sounding (VES) survey (Schlumberger array, AB/2 of not less than 500 m, minimum three soundings per site) and/or a 2D resistivity profile, interpreted by a qualified hydrogeologist. The siting report shall include the field curves, interpreted layers, recommended drilling point (GPS), expected aquifer and target depth, and shall be approved by AIDPOINT and the State Water Corporation (WES) before drilling.

2.2 Drilling and logging: pilot hole of 8½" minimum diameter by mud-rotary method (bentonite/polymer mud) or DTH air hammer in hard formations, with formation samples collected every 3 m and at every change of lithology. On completion, the pilot hole shall be logged with downhole geophysical logs (resistivity, spontaneous potential and natural gamma). The proposed borehole design (casing and screen positions) shall be submitted for approval before the hole is reamed to a minimum of 14¾" to the approved depth. A surface conductor casing of not less than 6 m shall be installed.

2.3 Casing and screens: 8" (DN200) uPVC deep-well casing and slotted screen to DIN 4925 heavy series or approved equivalent with adequate collapse resistance for the installation depth (steel casing where required by WES), with threaded joints, centralisers at maximum 12 m intervals, a 6 m sump pipe with bottom end cap, and the casing terminating 0.5 m above the finished pad. Screen slot size shall be 0.75 mm or as determined by sieve analysis, and screens shall be placed against the productive zones identified from the logs.

2.4 Gravel pack and well lining (sanitary seal): washed, well-rounded silica gravel (≥ 90% silica, 2–4 mm or as designed) placed by tremie from the bottom to at least 10 m above the top screen; a bentonite pellet/chip seal of at least 3 m above the gravel pack; and a cement–bentonite grout sanitary seal from ground level to a minimum depth of 10 m, in line with WES practice.

2.5 Development and disinfection: each borehole shall be developed by air-lifting with an adequately sized high-pressure compressor, surging and, where mud-rotary drilling is used, a mud dispersant, for a minimum of 12 hours and until the water is clear and sand-free (sand content < 5 mg/L, turbidity < 5 NTU). A verticality/alignment check shall be carried out and the borehole shall be shock-chlorinated (minimum 50 mg/L free chlorine, 12–24 hours contact) and purged.

2.6 Pumping tests: a step-drawdown test (minimum four steps of 100 minutes), a constant-rate discharge test of minimum 24 hours (extended to 72 hours where required by WES or AIDPOINT) and a recovery test until 95% recovery or 12 hours, using a calibrated flow meter and electric dipper. The analysis report shall state transmissivity, specific capacity, safe yield, recommended pump setting depth and pump duty point.

2.7 Acceptance yield: a borehole is accepted as productive where the safe yield confirmed by the 24-hour constant-rate test is not less than 0.5 L/s (1.8 m^3/h). Where the safe yield is between 0.35 and 0.5 L/s, acceptance is at AIDPOINT's written decision with demand-management measures. A borehole

yielding less than 0.35 L/s, or failing the water-quality requirements, shall be classed as unsuccessful.

2.8 Water quality: samples shall be analysed by a WES/SSMO-recognised laboratory for physical and chemical parameters (pH, EC, TDS, turbidity, colour, temperature, hardness, chloride, sulphate, nitrate, nitrite, fluoride, iron, manganese, arsenic, sodium) and bacteriological parameters (E. coli/thermotolerant coliforms and total coliforms). Results shall comply with the WHO Guidelines for Drinking-water Quality and the Sudanese drinking-water standard (E. coli 0/100 ml; turbidity < 5 NTU). No pump shall be installed until the water-quality results are accepted by AIDPOINT and WES.

2.9 Unsuccessful (dry) boreholes: where a borehole drilled at the approved point, by the approved method and to the approved depth is unsuccessful, the Contractor shall be paid for the metres drilled at the BOQ rate and for backfilling/sealing (BOQ item 1.6); casing, screen and other items not installed shall not be paid. Where the failure results from the Contractor's fault (e.g. collapse, lost tools, poor workmanship or deviation from the approved design), no payment shall be made and the borehole shall be re-drilled at the Contractor's cost.

3. Solar and Water System Works

Where applicable, the Contractor shall supply, install, test and commission the complete solar pumping, water storage and distribution systems in accordance with the applicable BOQ.

3.1 Pump selection: The submersible pump shall be selected after the pumping test to deliver the approved safe yield (minimum 30 m^3/day) against the total dynamic head (dynamic water level, tank elevation and friction losses). The BOQ basis is a 6" stainless-steel submersible pump with a 7.5 kW (10 HP), 3-phase 380–415 V motor. The Contractor shall submit a sizing report from the pump manufacturer's design software for AIDPOINT's approval before procurement.

3.2 Inverter/VFD: The solar pump inverter shall be rated not less than the pump motor rated power and full-load current (7.5 kW basis; the next frame size, 11 kW, is acceptable for high-temperature derating). An inverter rated at twice the motor power is not required and shall not be offered unless justified by the approved sizing report.

3.3 PV array: The array shall be not less than 1.4 times the pump motor rated power. The BOQ basis is 20 × 550 Wp modules (11 kWp) per borehole. Strings shall be designed so that the open-circuit voltage at the lowest site temperature does not exceed the inverter's maximum DC input voltage and the maximum-power voltage at 70 °C cell temperature remains within the inverter's MPPT range. All modules at a site shall be of the same make and model.

3.4 Performance and standards: on commissioning, each system shall deliver at least 30 m^3/day on a clear day, measured with the bulk water meter, and shall be tested on generator input via the changeover switch. PV modules shall comply with IEC 61215/IEC 61730, inverters with IEC 62109, and the system design with IEC 62253. Warranties: PV modules 10 years (product) and 25 years (linear performance); pump, motor and inverter minimum 2 years.

4. Testing and Handover

All works shall be inspected, tested and commissioned before acceptance. The Contractor shall submit the required geophysical reports, drilling logs, pumping-test results, water-quality results and final handover documentation.

A defects liability period of twelve (12) months from the date of handover shall apply. The handover package shall include as-built drawings, O&M manuals (English and Arabic), warranty certificates and a record of on-site training of the caretakers/WASH committee.

5. Standards and Quality

Materials and workmanship shall comply with the standards specified in the BOQ. Equivalent authoritative standards providing substantially equal or higher quality may be accepted subject to AIDPOINT's prior written approval. This follows the Bank's own equivalency provision

6. Schedule of Locations

The works are organized into three Lots at the locations listed below. A total of thirty-two (32) boreholes will be constructed: one borehole at each of the 29 sites listed below, plus one additional borehole in each Lot (No. 30 in Lot 1, No. 31 in Lot 2 and No. 32 in Lot 3) at a site to be confirmed in writing by AIDPOINT before contract signature, within the localities listed for that Lot. Bidders shall price the additional boreholes on the same basis as the listed sites. Lot allocation: Lot 1 – 6 boreholes; Lot 2 – 14 boreholes; Lot 3 – 12 boreholes.

Lot / State	No.	Water Station / Site	Locality
Lot 1 - Northern State	1	Kabtait North	Dongola
	2	Alhafir Masho	Dongola
	3	Kodi	Dongola
Lot 1 - Northern State	30	Additional borehole – site to be confirmed by AIDPOINT before contract signature	Dongola (site to be confirmed)
	4	Alsilaim section 3 South West	Dongola
	5	Alkhandag	Dongola
Lot 2 - Khartoum State	6	Ombada Quarter 20	Ombada
	7	Dar-Alsalam Quarter 13	Ombada
	8	Alaamiria Quarter 44	Ombada
	9	Ombada Quarter 43	Ombada
	10	Dar-Alsalam Quarter 60	Ombada
	11	Dar-Alsalam Quarter 51	Ombada
	12	Dar-Alsalam Quarter 33	Ombada
	13	Alsabrab Water Station	Sharg Alneel
	14	Alsheikh Awad Alkareem Water Station	Sharg Alneel
	15	Alfalooja Water Station	Jabal Awlia
	16	Altrayah Water Station	Jabal Awlia
Lot 2 - Khartoum State	31	Additional borehole – site to be confirmed by AIDPOINT before contract signature	Ombada / Sharg Alneel / Jabal Awlia / Salha (site to be confirmed)
	17	Wad Alagali Water Station	Jabal Awlia
	18	Jadeen Bashair Water Station	Salha (Omdurman)
Lot 3 - White Nile State	19	Almaleeh Water Station	Ed Dueim
	20	Alryad Water Station	Ed Dueim
	21	Awlad Ismail Water Station	Ed Dueim
	22	Alkaradma Water Station	Ed Dueim
	23	Alshatawi Water Station	Um Rimta
	24	Hafeer Alshaib Water Station	Um Rimta
	25	Algrainab Water Station	Um Rimta
	26	Alhano Water Station	Um Rimta

Lot / State	No.	Water Station / Site	Locality
	27	Umkidairat Water Station	Tendalti
	28	Umkidairat 2 Water Station	Tendalti
	29	Umkidairat 3 Water Station	Tendalti
Lot 3 - White Nile State	32	Additional borehole – site to be confirmed by AIDPOINT before contract signature	Ed Dueim / Um Rimta / Tendalti (site to be confirmed)

Annex 1

FORM OF QUOTATION

(Date): _____

To:_____ (*Employer's Name*)

_____ (*Employer's Address*)

_____

We offer to execute the_____(name and number of Contract) in accordance with the Conditions of Contract (in the Form of Contract made available on request) for the Contract Price of _____(amount in words and numbers) (_____) (name of currency)_____. We propose to complete the Works described in the Contract within a period of _____months from the Date of Signing of the Contract.

This Quotation and your written acceptance will constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Quotation you receive.

We hereby confirm that this Quotation complies with the Validity of the Offer required by the proposal documents.

We have not been associated with the firm that prepared for the Employer the design and specifications of the contract that is subject of this request for quotation.

We are not in the IsDB sanctions list.

Authorized Signature: _____

Name and Title of Signatory _____

_____

Name of Contractor: _____

Address : _____

_____

Phone Number : _____

Fax Number, if any _____

Email address (optional) _____=

Annex 2

BILL OF QUANTITIES

Geophysical Survey, Drilling and Construction of 32 Solar-Powered Boreholes with Water Storage and Distribution Systems in Khartoum, White Nile and Northern States – All Lots (quantities for 32 boreholes)

The quantities below are for all 32 boreholes. For each Lot bid, the bidder shall submit a separate copy of this Bill of Quantities in which the quantity of every item is pro-rated to the number of boreholes in that Lot (Lot 1 – 6; Lot 2 – 14; Lot 3 – 12 boreholes). Quantities for drilling, casing, screen, gravel pack and pipeline are estimates; payment shall be made on the measured quantities actually executed and accepted, at the quoted unit rates.

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
1. GEOPHYSICAL SURVEY, DRILLING & GEOPHYSICAL LOGGING					
1.1	Hydrogeological desk review and geophysical survey at each site: vertical electrical sounding (VES, Schlumberger array, AB/2 ≥ 500 m, minimum 3 soundings per site) and/or 2D resistivity profile, including interpretation by a qualified hydrogeologist and a siting report (field curves, interpreted layers, recommended drilling point with GPS coordinates, expected aquifer and target depth) submitted for AIDPOINT/WES approval before drilling.	Site	32		
1.2	Mobilization and demobilization of drilling rig, heavy machinery, test-pumping unit, compressor, technical crew and materials to each approved site across Northern, Khartoum and White Nile States, including rig set-up, mud pits, inter-site moves, demobilization and site restoration.	Site	32		
1.3	Drilling pilot borehole (minimum 8½" diameter) from ground level to design depth (target 215 m per borehole) by mud-rotary method with bentonite/polymer mud (or DTH air hammer where hard rock/basement is encountered), including formation sampling every 3 m and at each change of lithology, and a detailed drilling/lithological log.	Meter	6,880		
1.4	Downhole geophysical logging of the completed pilot hole (short/long normal resistivity, spontaneous potential and natural gamma) by a qualified operator, with interpreted logs and the proposed borehole design (casing and screen positions) submitted for approval before reaming.	Well	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
1.5	Reaming the pilot hole to minimum 14¾" diameter from ground level to the approved design depth (to provide ≥ 75 mm annulus around the 8" casing for gravel pack), including supply and installation of a surface conductor casing of not less than 6 m.	Meter	6,880		
1.6	Backfilling and sealing of an unsuccessful/dry borehole with clay and cement–bentonite grout, removal of any recoverable materials and restoration of the site – provisional item, payable only when instructed in writing by AIDPOINT (Section 1, clause 2.9).	Well	3		
2. CASING, SCREENING & WELL COMPLETION					
2.1	Supply and installation of 8" (DN200) uPVC deep-well blind casing, DIN 4925 heavy series or approved equivalent with adequate collapse resistance for the installation depth (steel casing where required by WES), threaded and coupled joints, centralisers at maximum 12 m intervals, extending 0.5 m above the finished concrete pad, including a 6 m sump pipe with bottom end cap. (Indicative 168 m per borehole; final lengths per the approved borehole design.)	Meter	5,376		
2.2	Supply and installation of 8" (DN200) uPVC slotted well screen, DIN 4925 heavy series or approved equivalent, slot size 0.75 mm (or as determined from sieve analysis of aquifer samples), placed against the productive aquifer zones identified from the lithological and geophysical logs. (Indicative 48 m per borehole.)	Meter	1,504		
2.3	Gravel pack: supply and placement by tremie pipe of washed, well-rounded silica gravel (≥ 90% silica, 2–4 mm or as designed from sieve analysis) in the annulus from the bottom of the borehole to at least 10 m above the top screen, with formation stabiliser above. (Indicative 8 m^3 per borehole.)	m^3	256		
2.4	Well lining and sanitary seal: bentonite pellet/chip seal (minimum 3 m) above the gravel pack, backfill with formation stabiliser, and cement–bentonite grout sanitary seal from ground level to a minimum depth of 10 m, in line with WES practice.	Well	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
2.5	Borehole development by air-lifting with an adequately sized high-pressure compressor, surging/jetting and mud dispersant (where mud-rotary drilling is used) for a minimum of 12 hours and until the discharge is clear and sand-free (sand < 5 mg/L, turbidity < 5 NTU), including verticality/alignment check and shock chlorination (minimum 50 mg/L free chlorine, 12–24 hours contact) followed by purging.	Well	32		
2.6	Pumping test with test pump, generator, calibrated flow meter and electric dipper: step-drawdown test (minimum 4 steps × 100 minutes), constant-rate discharge test (minimum 24 hours; up to 72 hours where required by WES/AIDPOINT) and recovery test (to 95% recovery or 12 hours), including analysis report stating transmissivity, specific capacity, safe yield, recommended pump setting depth and duty point.	Well	32		
2.7	Physical and chemical water-quality analysis (pH, EC, TDS, turbidity, colour, temperature, hardness, chloride, sulphate, nitrate, nitrite, fluoride, iron, manganese, arsenic, sodium) by a WES/SSMO-recognised laboratory against WHO Guidelines and the Sudanese standard – samples at the end of the constant-rate test and at commissioning (2 per borehole).	Test	64		
2.8	Bacteriological water-quality analysis (E. coli/thermotolerant coliforms and total coliforms per 100 ml) by a WES/SSMO-recognised laboratory – samples at the end of the pumping test, after disinfection, at commissioning and before handover (One per borehole).	Test	32		
2.9	Borehole completion report per borehole (approved siting report, drilling/lithological log, geophysical log, as-built borehole design, casing/screen tally, static and dynamic water levels, pumping-test analysis, water-quality results, GPS coordinates and photographs), in English with Arabic summary, in hard and electronic copy.	Well	32		
3. HEADWORKS & SURFACE PROTECTION					
3.1	Construction of a reinforced concrete sanitary apron/pad around the wellhead (minimum 2.0 m ×	Set / Well	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
	2.0 m × 0.15 m, C25 concrete, sloped away from the casing with a raised edge and drainage outlet to a soak-away), with a lockable heavy-duty steel wellhead cap allowing sealed entry of the riser pipe and cables, and a 25 mm (¾") dip tube for water-level measurement.				
4. SOLAR PV ARRAY & MOUNTING STRUCTURE					
4.1	550Wp Poly/Monocrystalline PV Modules: High-efficiency N-Type/PERC, Tier-1 (TUV/IEC certified), anodized aluminum frame, IP68 junction box, low temperature coefficient (≤ -0.35%/°C), rated for harsh desert environments. BOQ basis: 20 modules (11 kWp) per borehole; final array configuration per the approved sizing design (Section 1, clause 3.3).	Pcs	640		
4.2	Hot-Dip Galvanized Mounting Structure: Elevated ground-mount frame (heavy-duty, wind load capability > 130 km/h), clearance height 1.5m for ventilation and cooling, 15° fixed tilt, including legs, purlins, clamps, stainless steel (A2/A4) fasteners, and concrete footing pads (sized for 20 modules / 11 kWp per site), with anti-theft (tamper-proof) fasteners.	Set	32		
4.3	DC Cabling & Interconnections: 6 sq mm UV-resistant single-core solar DC cable (Red/Black), halogen-free, MC4 IP68 connectors, heavy-duty UV-stabilized conduit or trunking. Cables sized for ≤ 2% voltage drop.	Lot	32		
5. SUBMERSIBLE PUMP & MOTOR SET					
5.1	Heavy-duty 6" stainless-steel submersible pump set: 7.5 kW (10 HP), 3-phase 380–415 V motor with thermal protection, SS304/SS316 multi-stage centrifugal pump end with high sand tolerance for continuous duty; duty point to be confirmed from the approved pumping-test results (BOQ basis: 5–8 m^3/h at a total dynamic head of up to 150 m). Includes heavy-duty 4-core (3 + earth) 10 sq mm flat submersible drop cable matched to the approved pump setting depth (BOQ basis 120 m per borehole) and heat-shrink resin-filled waterproof cable joint kit. Sizing report from the manufacturer's software to be approved before procurement.	Unit	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
5.2	Piping & wellhead assembly: 2" (DN50) galvanized steel riser pipes, heavy series (BS EN 10255 heavy) or approved equivalent rated for the pump shut-off head, length to suit the pump setting; wellhead flange/clamp assembly, pressure gauge, non-return valve, air-release valve, brass gate valve, sampling tap and DN50 bulk water meter.	Lot	32		
5.3	Submersible Safety Cable: 6mm stainless steel (SS316) wire rope with heavy-duty wire clamps for structural pump support. (BOQ basis 120 m per borehole; length to match the approved pump setting depth.)	Meters	3,840		
6. CONTROL, PROTECTION & SWITCHGEAR					
6.1	Solar Pump Inverter / VFD Controller rated not less than the pump motor rated power and full-load current (7.5 kW / 10 HP, 3-phase 380–415 V output; the next frame size, 11 kW, is acceptable for high-temperature derating), built-in MPPT (efficiency ≥ 99%), maximum DC input voltage compatible with the approved PV string design, IP54/IP65 enclosure (or IP20 mounted inside the control house), dual input (solar DC / generator AC), with dry-run, motor overload, phase-loss, over-temperature, over-voltage and under-voltage protection, soft start and display of operating data.	Unit	32		
6.2	DC/AC Combiner Box & Switchgear: Heavy-duty weather-proof IP65 box equipped with DC 1000V/1200V isolator switch, DC fuses (25A), DC Surge Protection Device (SPD Type II), AC circuit breaker, AC SPD, and status indicator lights.	Set	32		
6.3	Manual Changeover Switch: 4-Pole 40A/63A heavy-duty manual changeover switch (Solar VFD vs. External Standby Generator Input) in a lockable enclosure.	Unit	32		
6.4	Borehole & Tank Sensors: Water level sensors (dry-run probe for borehole, tank full probe for elevated storage tank) with low-voltage signal cable 3 x 1.5 sq mm.	Set	32		
7. EARTHING & LIGHTNING PROTECTION					
7.1	System Earthing Kit: Copper-bonded earth rods (5/8" x 2.4m), earth pit inspection chambers, ground	Set	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
	enhancement compound (bentonite), 25 sq mm copper earth tape/cables connecting the structure, array frame, inverter, and pump house earth bar (earth resistance < 5 Ohms). Lightning Protection Kit: ESE or conventional air terminal spike mounted on array/mast, with down conductors (35 sq mm bare copper) and dedicated earthing pit.				
8. GABION FENCING & SECURITY PROTECTION (12m x 12m Solar Array Enclosure)					
8.1	Gabion Mesh Boxes & Rock Fill: Double-twisted hexagonal galvanized or PVC-coated steel wire mesh gabion baskets (2m x 1m x 1m or 1m x 1m x 1m), filled with dense, weather-resistant hard stone rock fill for base wall (1m height x 1m width along 48m perimeter).	Fence	32		
8.2	Chain-Link Fence & Posts (Upper Extension): Heavy-duty galvanized steel pipes (2" diameter) anchored into gabion base, topped with 1.5m high PVC-coated chain-link mesh and 3 strands of galvanized barbed wire on Y-cranks (total fence height: 2.5m).	Fence	32		
8.3	Security Access Gate: Heavy-duty double-leaf steel swing gate (3m wide x 2.5m high) with padlocking mechanism.	Set	32		
9. PUMP CONTROL HOUSE (3m x 3m Outer Dimensions)					
9.1	Construction of a pump control/guard house, 3.0 m × 3.0 m outer dimensions, 2.8 m clear internal height: plain/reinforced concrete strip foundations 0.6 m deep; walls of 200 mm solid concrete blocks (or burnt bricks) in cement mortar 1:4, plastered and painted inside and out; 100 mm C20 concrete floor slab on 150 mm compacted hardcore; roof of galvanized corrugated iron sheets (gauge 28) on steel purlins with 0.3 m overhang, secured against wind uplift; lockable steel door (0.9 m × 2.1 m) and two steel-barred ventilation openings with fly screen; cable ducts/sleeves, wall-mounted equipment board for the inverter and switchgear, and one 6 kg dry-powder fire extinguisher.	Unit	32		
10. ELEVATED WATER TANK & TOWER STRUCTURE (15 Cu. Meters)					
10.1	Heavy-duty 15m^3 food-grade polyethylene (HDPE/plastic) water tank: multi-layered, UV-stabilized, non-toxic, complete with lockable	Unit	32		

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
	manhole, internal/external ladders, level indicator, and threaded inlet, outlet, drain, and overflow fittings. Elevated on a 6m high hot-dip galvanized steel tower with columns, bracing, platform walkway, safety handrails, and reinforced concrete footings designed for wind, seismic, and structural loads.				
11. WATER DISTRIBUTION POINT & DONKEY CART STATION					
11.1	Distribution & Supply Main Pipeline: HDPE (PN10/PN16, 2" to 2.5" diameter) buried distribution pipeline (indicative 100 m per site; paid on measured length) from elevated tank to tap stand and donkey cart point, including trenching (0.8m depth), backfilling, isolating gate valves, and fittings.	Meter	3,200		
11.2	10-Tap Community Tap Stand: Reinforced concrete splash pad, masonry stand structure with plaster/tiling, drainage channel to soakaway pit, fitted with 10 lockable 3/4" heavy-duty brass bib taps and internal manifold piping.	Unit	32		
11.3	Donkey Cart Water Filling Point: High-flow 2" galvanized steel/HDPE discharge pipe with heavy-duty quick-opening brass ball valve, flexible outlet hose, support structure, and reinforced concrete slab for cart parking and overflow runoff.	Unit	32		
11.4	Distribution Point Security Fence (8m x 6m): 2m high galvanized steel pipe posts anchored in concrete, 2m PVC-coated chain-link mesh along 28m perimeter, and 1.5m wide single-leaf steel access gate for crowd control.	Set	32		
11.5	Testing, commissioning and handover of the complete system: 30 m^3/day output test on a clear day (bulk water meter), pressure and leak test of pipework, check of all inverter protections, generator changeover test and earthing resistance test (< 5 Ohms); as-built drawings, O&M manuals (English/Arabic), warranty certificates, basic tool kit and one-day on-site training of caretakers/WASH committee.	Site	32		
12. TOTALS					
				SUBTOTAL (Items 1.0 to 11.0)	

Item No.	Item Description	Unit	Qty	Unit Cost (USD)	Total Cost (USD)
GRAND TOTAL ESTIMATED COST (USD)					

1. **Scope of Contract Price**
The Contractor's prices shall cover the complete geophysical survey and borehole drilling works specified in the BOQ and Technical Specifications, including mobilization and demobilization, geophysical investigation/VES, interpretation and reporting, borehole siting, drilling, casing and screens, gravel packing, development, pumping tests, water-quality testing, wellhead completion, labour, equipment, materials, transportation and all incidental works necessary for completion. Payment shall be based on the accepted BOQ rates and the actual quantities properly completed, measured, verified and accepted by AIDPOINT, unless a particular BOQ item is expressly identified as a lump-sum item.

2. Geophysical Survey Prior to Drilling
The Contractor shall conduct the required geophysical investigation before commencement of drilling. The survey shall be performed in accordance with the Technical Specifications and shall identify the recommended drilling location and target depth.

3. Submission and Approval of Geophysical Results
The Contractor shall submit the geophysical survey report, including survey results, interpretation, recommended drilling coordinates and proposed drilling depth, to AIDPOINT for technical review. No drilling shall commence without AIDPOINT's written approval of the drilling location.

4. **Drilling Depth and Measurement**
The bidder shall provide unit rates for drilling and related works based on the estimated quantities and maximum/design depths stated in the BOQ. Following approval of the geophysical results, AIDPOINT shall confirm the authorized drilling location and target depth. Payment shall be based on the actual approved quantities properly executed, measured and accepted, using the corresponding rates in the accepted BOQ. Drilling beyond the authorized depth shall not be payable without AIDPOINT's prior written authorization.

5. Drilling Beyond the Specified Maximum Depth
Drilling beyond the maximum depth stated in the Technical Specifications shall only be undertaken following prior written authorization from AIDPOINT. Any associated additional cost shall be subject to prior written agreement and the applicable contractual variation procedure.

6. Unsuitable Site Following Geophysical Survey
Where the geophysical investigation determines that no technically suitable drilling point can reasonably be identified at the proposed site, the Contractor shall immediately notify AIDPOINT and submit the supporting technical findings. The Contractor shall not proceed with drilling without written instruction from AIDPOINT. Any decision to relocate, undertake additional investigation or discontinue the site shall be made by AIDPOINT.

7. Unsuccessful or Dry Borehole
Where drilling at an AIDPOINT-approved location does not produce the required yield or results in an unsuccessful/dry borehole, the Contractor shall submit the complete drilling and geological records for technical assessment. Responsibility, payment and any requirement for additional drilling shall be determined in accordance with the Technical Specifications and the Contractor's compliance with the approved methodology and instructions. No repeat or additional drilling shall be undertaken without AIDPOINT's written authorization.

8. No Unauthorized Variations or Additional Costs
No additional survey, relocation, additional drilling, increase in depth, change in design or other

additional work shall be payable unless authorized in writing by AIDPOINT before the work is undertaken. Verbal instructions shall not constitute authorization for additional payment.

9. Quality of Materials and Workmanship
All materials, equipment and workmanship shall comply with the BOQ and Technical Specifications. AIDPOINT reserves the right to inspect the works and reject any materials, equipment or workmanship that do not meet the specified requirements. The Contractor shall rectify non-compliant work at its own cost.

10. Testing and Borehole Development
The Contractor shall undertake borehole development, step-drawdown testing, constant-rate pumping tests, recovery monitoring and water-quality testing in accordance with the Technical Specifications. Test results shall be submitted to AIDPOINT for review and acceptance.

11. Completion and Acceptance
A borehole shall not be considered complete until all required survey, drilling, construction, development, testing and wellhead works have been completed and the required technical documentation has been submitted and accepted by AIDPOINT.

12. Documentation and Handover
The Contractor shall submit, as applicable, the geophysical survey report, coordinates of the selected drilling point, drilling/lithological log, borehole construction record, casing and screen details, static and dynamic water levels, pumping-test results, confirmed yield, water-quality laboratory results and final borehole completion report.

13. Payment
Payment shall be made in accordance with the payment provisions of the Contract following verification and acceptance of the required works and supporting documentation. The accepted unit rates and prices shall constitute full compensation for the scope specified for each BOQ item, except for variations expressly authorized in writing by AIDPOINT.

14. Health, Safety and Environmental Requirements
The Contractor shall be responsible for the safe execution of the works and shall take appropriate measures to protect personnel, communities, property and the environment throughout survey and drilling activities.

15. Contractor Responsibility
Aid Point's review or approval of geophysical results, drilling locations, materials or works shall not relieve the Contractor of its contractual responsibility to perform the works in accordance with the BOQ, Technical Specifications and Contract.