Government of Pakistan
Ministry of Water Resources
Pakistan Council of Research in Water Resources
Drainage and Reclamation Institute of Pakistan

TENDER NOTICE
INSTALLATION OF SOLAR POWERED TUBEWELL AT DRIP, TANDO JAM

The Drainage and Reclamation Institute of Pakistan (DRIP), a regional office of PCRWR, Government of Pakistan, invites sealed bids from reputable firms and contractors duly registered with the relevant tax authorities and fully compliant with the PPRA rules of the Government of Pakistan. Eligible bidders must possess relevant experience for the supply, installation, and commissioning of a solar-powered tube well in accordance with the following scope of work:

- Two Bore wells including drilling and casing at 70-100 ft depth
- Supply and installation of solar-powered tube well with all accessories (complete package)
- Construction of water distribution box and pump house
- Fencing around Solar Panels
- Testing and commissioning of the system
- Necessary Training on operation and maintenance of the system

Eligibility Criteria:

- GST and NTN registration
- Proven experience in similar nature of work
- Affidavit of non-blacklisting
- Bank statement showing financial capacity

Tender documents containing detailed terms and conditions, specifications, and bill of quantities can be obtained from the office of the undersigned during office hours from May 16, 2025 upon payment of Rs. 1000/- non-refundable tender fee. Bidding documents may also be downloaded from the PCRWR website (www.pcrwr.gov.pk) however, a deposit slip of Rs. 1,000/- must be submitted along with the bid at the time of submission. Sealed bids must reach the office of the undersigned on or before June 2, 2025 by 11:00 AM. Bids will be opened on the same day at 11:30 AM in the presence of bidders or their authorized representatives. All bids must be accompanied by a bid security of 2% of the estimated cost in the form of a Call Deposit Receipt (CDR) in favor of the Director Incharge, DRIP Tando Jam or bids that are conditional in nature, shall not be entertained. The competent authority reserves the right to reject any or all bids as per PPRA rules.

Regional Director
DRIP, Tando Jam

Tando Qaiser Road, Tando Jam
Post Code # 70060 Ph. # 022-2765331, Fax # 022-2765728
E-mail: driptandojam@gmail.com

Tender Fee Rs. 1,000

Government of Pakistan
Ministry of Water Resources
Pakistan Council of Research in Water Resources
Drainage and Reclamation Institute of Pakistan

TENDER DOCUMENT

INSTALLATION OF SOLAR POWERED TUBE WELL AT DRIP, TANDO JAM

Submission deadline: June 2, 2025

Tando Qaiser Road, Tando Jam
Post Code # 70060 Ph. # 022-2765331
E-mail: driptandojam@gmail.com

1. General Information About the Contractor/Firm

Firm Name: _____

Business Type: _____

Address: _____

NTN Number: _____

GST Number: _____

Active Taxpayer Status: _____

Cell Phone / WhatsApp No. _____

Email: _____

Contact Person: _____

Signature & Seal of Contractor/Firm

1. GENERAL INSTRUCTIONS

Sealed bids are invited from eligible firms, and contractors, duly registered with relevant tax authorities and in compliance with PPRA Rules of the Government of Pakistan, for the supply, installation, and commissioning of solar powered tube well at DRIP, Tando Jam. Bids must be submitted under Single Stage – Two Envelope Procedure as per PPRA guidelines. Technical and Financial proposals must be in separate sealed envelopes. The envelopes should be clearly marked "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL".

1.1 Eligibility Criteria:

- GST and NTN registration
- Proven experience in similar nature of work
- Affidavit of non-blacklisting
- Bank statement showing financial capacity

1.2 Bid Security:

All bids must be accompanied by a bid security / earnest money of 2% of the estimated cost in the form of a Call Deposit Receipt (CDR) in favor of the Director Incharge, DRIP Tando Jam. Unsealed bids or those without bid security / earnest money will not be entertained.

1.3 Bid Validity:

90 days from the date of bid opening.

1.4 Bidding Document Cost:

Tender documents containing detailed terms and conditions, specifications, and bill of quantities can be obtained from the DRIP, Tando Jam office during office hours from 16th May, 2025 upon payment of Rs. 1000/- non-refundable tender fee. Bidding documents may also be downloaded from the PCRWR website (www.pcrwr.gov.pk) however, a deposit slip of Rs. 1,000/- must be submitted along with the bid at the time of submission.

1.5 Submission of Bids:

Sealed bids must reach the DRIP Office, Tando Jam on or before June 2, 2025 by 11:00 AM

1.6 Opening of Bids:

Bids will be opened on the same day at 11:30 AM in the presence of bidders or their authorized representatives

1.7 Rejection of Bids:

The competent authority reserves the right to reject any or all bids as per PPRA Rules at any time prior to award of Contract.

2. SCOPE OF WORK

2.1 Two bore well Drilling and Casing

- Two boreholes, each 24 inches in diameter, will be drilled 60–80 feet apart to depths of 70–100 feet using rotary or percussion drilling methods with air or water flushing.
- Each borehole will be cased with 12-inch Class-B PVC pipes (ASTM D1785) comprising blind casing and slotted screen sections (1.0–1.5 mm slot size) depending upon the aquifer characteristics line water table and water column.
- A gravel pack of 6 inch well-sorted quartz sand (2–4 mm) will be placed around the PVC pipes to act as a filter and prevent fine sediment intrusion.
- Pressure-fitted PVC bottom plug will be installed at the base of the screen.
- Wells will be developed using air-lifting or surging methods until a clear, stable discharge is observed.
- A two-hour constant rate pumping test will be conducted to verify yield and performance.
- Both risers pipe each 6 inch HDPE pipe will be connected with main 6 inch HDPE delivery line.
- Soil and water samples will be collected at 15–20 ft intervals during drilling for bore logging and lithological profiling.

2.2 Submersible Water Pumps

- 2 Nos. 15 HP high-efficiency submersible pumps ,
- Each Pump: 6 inch submersible pump body steel, 15 HP
- Flow Rate: Approximately 1.5- 2.0 cusecs / bore
- Head: 30–35 meters total dynamic head
- Power Supply: Three-phase, 415V
- Both risers 6 inch HDPE pipes will be connected with main 6 inch HDPE delivery Pipe
- Bore Casing Requirement: Minimum 12-inch borewell casing
- Selective switch for operating Pump 1 or Pump 2

2.3 Solar System with Solar Panels and Inverter/ VFD with Mounted Structure and all Accessories

- The solar system will comprise 42 Tier-1 N-Type (imported) Bifacial 585W panels (or equivalent), providing ~25 kW capacity with a 25-year performance warranty.

- Panels will be mounted on fixed 14-gauge galvanized steel structures with RCC footings and anti-corrosive paint. Panel Spacing: 3–5 feet between rows to avoid shading and ensure airflow. Height: Bottom of panels at least 3-4 feet above ground; Tilt Angle: Standard tilt angle between 15°–30°.
- A 18-22 kW high-efficiency inverter/VFD with MPPT, variable speed control, and built-in protections (overload, overcurrent, low voltage) will be used.
- The inverter will be housed in a weatherproof enclosure VFD Box IP 55 for durability and reliable performance.
- The system will include a combiner box with DC protection (SPD, isolators, fuses), proper earthing, lightning protection, and UV-resistant cables to ensure safety and compliance with relevant electrical standards.

2.4 Water Distribution Box

- A 6' x 5' x 4' water distribution box will be built using waterproofed RCC or brick masonry with a 6-inch RCC base.
- It will have two 6-inch inlets (from bore wells) and multiple 6-inch outlets fitted with MS or PVC control valves.
- Features include a sediment trap or mesh screen, internal waterproofing, an overflow outlet, and a heavy-duty manhole cover for access.

2.5 Pre-Fabricated Room

- The prefabricated room (10 ft × 10 ft × 8 ft) will feature a mild steel base frame, insulated sandwich panel walls and roof (50 mm EPS/PU), and a waterproof ply floor. It includes a steel door, 2-AC/DC fans, sliding aluminum window, basic electrical fittings (LED lights, fan point, sockets), and is suitable for quick installation on a plinth or platform.

2.6 Fencing around Solar Panels

- The solar installation, prefabricated room and water distribution box (6' × 5') will be enclosed within a 50 ft × 40 ft (2,000 sq ft) fenced area, allowing adequate space for equipment, maintenance, and safety clearance.
- The fencing will be a 5 ft high GI chain-link fence (10-gauge, 2" × 2" mesh), supported by GI pipes at 8 ft intervals, anchored in RCC footings (1.5' × 1.5' × 2').
- A lockable MS gate will be installed for access.
- All metallic components will be anti-rust treated and painted.
- The enclosure will include safety signage and earthing provisions for compliance and protection.

2.7 Board Size & Material

- The display board will measure 4 ft × 6 ft**,** made of 3 mm weatherproof MS sheet**,** mounted on a 14-gauge MS angle frame (1.5" × 1.5") with anti-rust coating. It will be fixed on two 2.5" MS poles (8 ft high) embedded in RCC footings (1.5' × 1.5' × 2')**.**

- The surface will have a UV-protected reflective vinyl finish for durability and visibility, and will display a comprehensive write-up of all technical specifications related to the solar system, bore wells, pump house, and water distribution setup.

3. BID PRICING & QUOTING

- Prices should be inclusive of supply, transportation, installation and commissioning with all applicable taxes.
- Prices must be quoted in Pakistani Rupees (PKR).
- No bids will be entertained after the submission deadline.

4. EVALUATION CRITERIA

The tender evaluation methods will be followed as under:

- **Technical soundness (50%)**
  - 50 marks for relevant experience for the last three years (work orders and performance)
  - 30 marks for relevant manpower/technical hands
  - 20 marks for relevant equipment/machinery
- **Financial (50%)**
  - Lowest price submitted:100 marks
  - 2nd lowest price submitted: 90 marks
  - 3rd lowest price submitted:80 marks
  - Further lowest bidder will be ranked with 10 less marks in descending order

5. AWARD OF CONTRACT

The Tender Evaluation Committee, DRIP, PCRWR will evaluate the bids based on technical and financial soundness in accordance with the terms and conditions set forth in this document. The lowest quoted bid, meeting the technical requirements as a whole, will be awarded the work. The contract shall be awarded to the lowest evaluated responsive bidder within the bid validity period, preferably within 30 days of bid opening, in accordance with PPRA Rules. DRIP,

PCRWR reserves the right to award the complete or partial work, subject to the availability of funds. The procuring agency reserves the right to increase, decrease, or cancel the tender without financial liability, in accordance with PPRA and other applicable government rules.

6. PRICES

Prices charged by the bidder for goods delivered and services performed under the contract shall not exceed from the prices quoted in its bid(s).

7. MODE OF PAYMENT

No advance payment shall be made to the successful bidder against any supply or work order under any circumstances. Such requests will not be entertained. Failure to execute the work as per the supply/ work order will result in the forfeiture of the earnest money. Payment shall be made through a cross cheque, which will be issued after receipt and approval of the inspection report submitted by the designated field officer of this office, as outlined below:

In case the 10% performance security is not provided, 90% of the payment will be released upon completion of the entire work, acceptance of the inspection report, and issuance of the completion certificate by designated field officer. All applicable government taxes on supplies and services shall be deducted as per prevailing rules. The remaining 10% payment will be released after successful completion of the six-month performance period.

8. PERFORMANCE GUARANTEE

The performance period/defect liability period will be six months, which will start from the date of the successful commissioning of the system in all respect. The successful bidder is required to furnish a performance security, equivalent to 10% of the contract amount within 10 days of issue of award of contract. This amount will be treated as compensation for any loss resulting from the contractor's failure to complete its obligation. Performance guarantee/security will be forfeited in case of failure to successfully complete the performance period.

9. COMPLETION PERIOD

The allotted work must be completed within the specified period of 20 days from the date of receipt of the work order. If the work is not completed within this timeframe, the contractor shall be liable to pay delay charges at the rate of 0.1% of the total project cost for each day of delay or treated as per PPRA rules. Furthermore, if the work is not completed within an additional 10 days (i.e., a total of 30 days), the contract may be canceled, and the earnest money forfeited.

10. GUARANTEE/WARRANTY

The warranty period shall be six months, commencing from the date of the successful commissioning of the system. In case of failure, necessary replacements or repairs will be arranged using the performance security. The successful bidder shall provide free maintenance for a period of three months. During the warranty period, any defective components must be repaired or replaced within 48 hours of being reported by designated field officer, ensuring uninterrupted system functionality. A representative of DRIP, PCRWR or the designated Field Officer may inspect any item, equipment, material, or service at any time during the contract period and may reject or require modifications. These inspections shall be final, except in cases of latent defects or fraud. Execution of each work item, in whole or part, shall be subject to verification by the Field Officer appointed by DRIP, PCRWR.

11. COMPLIANCE, DOCUMENTATION AND TRAINING

The contractor shall ensure compliance with safety and environmental standards and provide quality components. Upon completion, comprehensive documentation including manuals, as-built drawings, technical datasheets, a troubleshooting guide, and a handover report—must be submitted to the designated field officer. On-site training for DRIP, PCRWR staff covering system operation, safety, and maintenance will be conducted in both verbal and practical formats. All documents shall be provided in English (and Urdu if required), in hard and soft copies.

12. TECHNICAL SPECIFICATIONS

Item Specifications	Composite Rate inclusive of all taxes (Rs.)
1. Two bore well Drilling and Casing	
• Two boreholes, each 24 inches in diameter, will be drilled 60–80 feet apart to depths of 70–100 feet using rotary or percussion drilling methods with air or water flushing. • Each borehole will be cased with 12-inch Class-B PVC pipes (ASTM D1785) comprising blind casing and slotted screen sections (1.0–1.5 mm slot size) depending upon the aquifer characteristics line water table and water column. • A gravel pack of 6 inch well-sorted quartz sand (2–4 mm) will be placed around the PVC pipes to act as a filter and prevent fine sediment intrusion. • Pressure-fitted PVC bottom plug will be installed at the base of the screen. • Wells will be developed using air-lifting or surging methods until a clear, stable discharge is observed. • A two-hour constant rate pumping test will be conducted to verify yield and performance. • Both risers pipe each 6 inch HDPE pipe will be connected with main 6 inch HDPE delivery line. • Soil and water samples will be collected at 15–20 ft intervals during drilling for bore logging and lithological profiling.	
2. Submersible Water Pumps	
• 2 Nos. 15 HP high-efficiency submersible pumps ,	

• Each Pump: 6 inch submersible pump body steel, 15 HP • Flow Rate: Approximately 1.5- 2.0 cusecs / bore • Head: 30–35 meters total dynamic head • Power Supply: Three-phase, 415V • Both risers 6 inch HDPE pipes will be connected with main 6 inch HDPE delivery Pipe • Bore Casing Requirement: Minimum 12-inch borewell casing • Selective switch for operating Pump 1 or Pump 2.	
3. Solar System with Solar Panels and Inverter/ VFD with Mounted Structure and all Accessories	
• The solar system will comprise 42 Tier-1 N-Type (imported) Bifacial 585W panels (or equivalent), providing ~25 kW capacity with a 25-year performance warranty. • Panels will be mounted on fixed 14-gauge galvanized steel structures with RCC footings and anti-corrosive paint. Panel Spacing: 3–5 feet between rows to avoid shading and ensure airflow. Height: Bottom of panels at least 3-4 feet above ground; Tilt Angle: Standard tilt angle between 15°–30°. • A 18-22 kW high-efficiency inverter/VFD with MPPT, variable speed control, and built-in protections (overload, overcurrent, low voltage) will be used. • The inverter will be housed in a weatherproof enclosure VFD Box IP 55 for durability and reliable performance. • The system will include a combiner box with DC protection (SPD, isolators, fuses), proper earthing, lightning protection, and UV-resistant cables to	

ensure safety and compliance with relevant electrical standards.	
4. Water Distribution Box	
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• The enclosure will include safety signage and earthing provisions for compliance and protection.	
7. Board Size & Material	
• The display board will measure 4 ft × 6 ft**,** made of 3 mm weatherproof MS sheet**,** mounted on a 14-gauge MS angle frame (1.5" × 1.5") with anti-rust coating. It will be fixed on two 2.5" MS poles (8 ft high) embedded in RCC footings (1.5' × 1.5' × 2')**.** • The surface will have a UV-protected reflective vinyl finish for durability and visibility, and will display a comprehensive write-up of all technical specifications related to the solar system, bore wells, pump house, and water distribution setup.	
Total (Rs.) inclusive of all taxes	