

Tender Fee Rs. 500

TENDER DOCUMENT

for

Supply and Installation of Solar Pumping, Drip and Sprinkler Irrigation Systems alongwith vegetative cover for nude lands to curb wind erosion in Thal Desert

Under the Project

Improved Land and Water Conservation Practices to Enhance Waste Land Productivity in Thal Desert

Last Date for Submission: 30th December, 2020 (02:00 PM)

**Pakistan Council of Research in Water Resources (PCRWR)
Khayaban-e-Johar, Near Edhi Homes, H-8/1, Islamabad
Ph: 051-9101273, Fax: 051-9101278**

GENERAL INFORMATION ABOUT THE CONTRACTOR/FIRM

Name of Firm: _____

Main Line or Business: _____

Type of Organization: _____

National Tax Number: _____

General Sales Tax Number: _____

Status of Active Tax Payer: _____

Registration No. with PEC: _____

Phone No(s): _____

Mailing address: _____

Fax No. _____ Email: _____

Contact person: _____

**SIGNATURE & SEAL OF
CONTRACTOR/FIRM**

TERMS AND CONDITIONS

1. GENERAL

The bids are required from the firms/companies registered with Income/Sales Tax departments who are on active tax payers list of FBR as well as with Pakistan Engineering Council for supply and installation of solar pumping, drip and sprinkler irrigation systems alongwith the vegetative cover/shelter belt for nude lands to curb wind erosion at 2 sites in District Bhakkar, Khushab and Mianwali (to be specified in the work order) with following terms and conditions:

- i. The bidder has to submit earnest money equal to 2% of the total amount of bid(s) in the form of demand draft/pay order in favor of the Pakistan Council of Research in Water Resources (PCRWR), Islamabad. Tenders without earnest money would be rejected outrightly. In case of alternate prices, earnest money will be based on the maximum quoted price of the same item(s). The Earnest Money will be forfeited if a bidder(s) withdraws his bid(s) during the period of his bid(s) validity. The earnest money of unsuccessful bidder(s) will be returned to them after evaluation of bids.
- ii. Conditional/incomplete tenders will not be accepted.
- iii. Quoted price must be inclusive of all taxes having validity for 180 days from the date of tender opening.
- iv. The successful bidder would ensure that the bid is complete in all respects including supply, installation and commissioning of the solar pumping, drip and sprinkler systems alongwith the vegetative cover/shelter belt for nude lands to curb wind erosion at the specified locations (to be specified in the work order). **To manage and install missing accessories for complete functionality of the system would be the obligation of the bidder within the offered cost.**
- v. Last date of submission of offers is **December 30, 2020** by 02:00 PM. The tenders would be opened at 02:30 PM on the same day at PCRWR Islamabad in the presence of bidders, who may care to attend.

2. SCOPE OF SUPPLY

The bidder shall supply and install solar pumping, drip and sprinkler systems alongwith the vegetative cover/shelter belts for nude lands to curb wind erosion as per specifications given in **Annexure-I, II, III & IV** at the project sites in Thal desert. The bidder shall also be responsible for their commissioning and free service, if required, during warranty period of one year from the date of commissioning.

3. BID PRICE AND QUOTING

The bidder shall indicate, in his offer the unit prices inclusive of supply, transportation, installation with all taxes and total bid prices of the goods. Payment of any taxes, duties etc. levied before or after opening of bids by the Government shall be the full responsibility of the bidder(s) subject to prevailing regulations. The prices shall be quoted in Pakistan Rupees only. The person signing the bid shall initial all the pages of the bid(s) where entries are made. Prices charged by the supplier for goods delivered and services performed under the contract shall not exceed from the prices quoted by the supplier in its bid(s). No bid received after the prescribed deadline (date and time) would be entertained and will be rejected without caring the reasons for delayed receipt in PCRWR Head Office Islamabad even due to negligence of the postal/courier services etc.

4. PURCHASER'S RIGHTS

Pakistan Council of Research in Water Resources, Islamabad reserves the right to reduce/increase the quantity, prior to award of contract, thereby evolving no financial liability whatsoever or any other obligation on the part of PCRWR from the side of bidders. No other sub-office (outfit) of PCRWR is authorized to collect bid(s), only PCRWR Head Office located at **Khayaban-e-Johar H-8/1, Islamabad** is authorized to do so.

5. CONVERSING

No bidder shall contact Engineer/Employer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to award of Contract. Any effort by a bidder to influence Engineer/Employer in the Bid evaluation, Bid comparison or Contract Award decisions may result in the rejection of his Bid. Whereas, any bidder feeling aggrieved may lodge a written complaint not later than ten (10) days after the announcement of the bid evaluation result, however, mere fact of lodging a complaint shall not warrant suspension of procurement process.

6. PERFORMANCE GUARANTEE

The supplier will be responsible for complete installation of the system and for its free repair services, if required, during the performance guarantee period of one year, starting from the date of completion of training & full commissioning of the systems. The successful bidder(s) is/are required to furnish a performance guarantee in the shape of a demand draft or a CDR, equivalent to 10% of the total contract amount within ten days of issuance of supply order/award of contract. Performance guarantee/security will be forfeited in case of failure to successfully complete the performance period of the equipment. The withheld performance security will be returned after successful completion of the guarantee period.

7. DELIVERY AND INSTALLATION

- i. The bidder shall complete the installation and commissioning within one and a half months from the date of issuance of work order by the Pakistan Council of Research in Water Resources, Islamabad. A penalty @ 0.01% of the quoted price per day may be charged after expiry of delivery/installation/ commissioning period (which is 45 days after the award of work order) till the supply of equipment/item, its installation and commissioning. Supply order can be canceled after an extended period of **30 days** from the expiry of first supply order and earnest money will be forfeited.
- ii. The systems have to be installed at farmers' fields (9-10 acres) on the address to be given in work order.
- iii. For boring following specifications have to be followed:
 - Yield required 500 lpm (Sand free delivery from bore well) with proper developing of Minimum 60 Hrs or till sand free discharge is obtained.
 - Approximate depth - 130 feet (39.624 meter).
 - Assembly - Blind/ Slotted Pipes – 8 inch dia Up to complete depth. The slotted pipes must have an effective open area of at least 15% and the slotted size should be 1.6 mm. Centering guides may be used to maintain the verticality.

- Material – UPVC pipes (Class D) and HDPE pipe (pressure rating PN 10 or more) having following diameters

Specifications	Blind/Slotted Pipe UPVC (8")
Inner Diameter (mm)	198.5
Outer Diameter (mm)	219.1
Wall Thickness (mm)	10.3

- Packing. Well-graded pea gravel of good quality, durability and high sphericity.
- Sealing Done by grouting with cement concrete 1:2:4 (coarse aggregate 20 mm nominal size) to a depth of 4ft below the grouted level.

8. MODE OF PAYMENT

No advance payment will be made to any firm against any supply order. Normally no such demand will be entertained and failure to supply of items against supply order will lead to forfeiture of the earnest money. However, after delivery of items at site and verification by the designated engineer interim payment in form of running bill of 50% of the cost of supplied items can be made if the competent authority deems it necessary and is satisfied by the quality of the supplied items. Payment shall be made in the form of cross-cheque, which shall be issued, after receipt of equipment/items, inspection, installation, commissioning and training of the beneficiaries to be nominated by the farmer.

9. TRAINING

Supplier will arrange on-site necessary operation and maintenance training to the beneficiaries to be nominated by the farmer. The training package should be included as a part of bid.

10. PCRWR RESPONSIBILITY

Coordinate and collaborate with the firm about all the technical aspects of the project components.

11. EVALUATION CRITERIA

- The bids would be evaluated based upon their technical soundness.
- Technical soundness includes registration with Pakistan Engineering Council with a valid registration Certificate in Category C-6 or above for the year 2020, past work experience of similar nature and detail of relevant manpower and machinery.
- The bidder will provide past performance of the last 3 years along with supporting documents (work orders and performance certificates) and current commitments for technical scrutiny. (These may be verified by the client).
- The bidder will provide details of the relevant manpower and machinery on stamp paper required to carry out the said tasks.
- Due to compatibility issues of parts and accessories, the bids will be evaluated as a complete package and not in parts or separate components.
- The procuring agency may cancel the tender prior to award as per PPRA Rule No. 33(1).

- The representative of PCRWR, or his designated Field Engineer, may examine any item, equipment, material, supplies and/or services to be provided under this contract, at any time prior to expiry of this contract. He may reject or require alteration thereto or replacements thereof as a condition of acceptance and its findings shall be conclusive except in regard to defects or fraud which may appear later.
- Accomplishment and/or execution of each item of work (total or a part thereof) shall be considered subject to the verification of Field Engineer designated by the PCRWR for work accomplishment.

SOLAR PUMPING SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
1	Solar Panel Tier 1 with following specifications Manufacturing firm () Warranty Period (Minimum 10 years) Cell Type (Polycrystalline (330W)) Module Efficiency (15-17%) Open Circuit Voltage (43-48 V) Short Circuit Current (7-9.5 A) Maximum Power Voltage (V_{mp}) (35-40 V) Maximum Power Current (I_{mp}) (6-9 A) Temperature Coefficient of I_{sc} (0.04 to 0.07 %) Temperature Coefficient of V_{oc} (-0.35 to -0.30) Temperature Coefficient (P_{max})(-0.42 to -0.39%)	No.	52		
2	Complete set of Solar Submersible pump Power rating :(AC 7.5 HP), required discharge 7 lps at 130 ft head, with all the accessories including auto dry run shut off switch with (one year warranty) Model (if any) () Manufacturing firm () Origin of Assembly () Warranty Period (Minimum 5 years) Pump efficiency (Not less than 55%)	No.	02		
3	Solar Pump Inverter (7.5 HP) with Breakers/Distribution Box and hanging arrangement, complete in all aspects (PV disconnect) Model (if any) () Manufacturing firm () Origin of Assembly () MPPT Voltage Range (250VDC ~780VDC)	No.	02		
4	Frame/Tracker (Galvanized Iron) Moveable(dual Axis) with accessories	No.	06		
5	Wire 3-core (10-mm) Voltage (380-440 V) Current Rating (20 Amp)	Meter	130		
6	Wire 1-core (6-mm) Voltage (600-1000 V) Current Rating (20 Amp)	Meter	150		
7	Bore Development				
i.	Bore (10") (at 2 sites)	Meter	80		
ii.	Blind/Slotted Pipes UPVC 8", class – D	Meter	82		

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
iii.	Discharge Pipe HDPE (63 mm) and pressure rating of PN 10 or more	Meter	82		
iv.	63 mm HDPE connector	No.	04		
v.	Boring End Cap	No.	02		
8	Clutch Wire	Meter	165		
9	Other items required (if any)				
10	Installation Charges for Solar Pumping System	Rs./site	02 sites		
Total Unit Cost (Rs.) (A)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

DRIP IRRIGATION SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)						
1.	Drip Tubing/Lines										
i.	UV stabilized LDPE 16 - mm , WT 1.2 mm, with pressure rating of 2.5 kg/cm ² Brand name Country of origin	Meter	13,000								
ii.	UV stabilized 16-mm Integrated drip pipe WT1.2 mm, discharge of 4lph and dripper spacing of 40 cm Brand name: Country of origin:	Meter	14,000								
iii.	Ratchet clip,16-mm,UV stabilized	No.	1,400								
iv.	End Cap/ figure 8 type for 16-mm Drip line , UV stabilized	No.	1,000								
v.	Drip emitters 12 lph (PC) Brand Name : Country of origin:	No.	8,000								
vi.	Joiner 16-mm	No.	700								
vii.	GTO16-mm	No.	800								
viii.	LDPE Tee 16 mm	No.	40								
ix.	LDPE Elbow 16 mm	No.	30								
x.	Check Valve 16 mm	No.	40								
2.	Pipe Works										
i.	1 ½" uPVC pipe Class – D Brand name <table border="1" data-bbox="284 1534 703 1666"> <tr> <td>Inner Dia</td> <td>43.3 mm</td> </tr> <tr> <td>Outer Dia</td> <td>48.3 mm</td> </tr> <tr> <td>Wall Thickness</td> <td>2.5 mm</td> </tr> </table>	Inner Dia	43.3 mm	Outer Dia	48.3 mm	Wall Thickness	2.5 mm	Meter	1,000		
Inner Dia	43.3 mm										
Outer Dia	48.3 mm										
Wall Thickness	2.5 mm										
ii.	2" uPVC pipe Class D Brand name <table border="1" data-bbox="284 1780 703 1933"> <tr> <td>Inner Dia</td> <td>54.1 mm</td> </tr> <tr> <td>Outer Dia</td> <td>60.3 mm</td> </tr> <tr> <td>Wall Thickness</td> <td>3.1 mm</td> </tr> </table>	Inner Dia	54.1 mm	Outer Dia	60.3 mm	Wall Thickness	3.1 mm	Meter	800		
Inner Dia	54.1 mm										
Outer Dia	60.3 mm										
Wall Thickness	3.1 mm										
3.	uPVC Pipe Fittings										
i.	2x1½" uPVC reducer	No.	50								

ii.	1½ " uPVC 90 deg. Elbow	No.	40		
iii.	2 " uPVC 90 deg. Elbow	No.	50		
iv.	1½ " uPVC equal tee	No.	08		
v.	2 " uPVC equal tee	No.	16		
vi.	1½" uPVC socket	No.	08		
vii.	2" uPVC socket	No.	06		
viii.	1½" uPVC ball valve	No.	10		
ix.	2" uPVC ball valve	No.	08		
x.	1½" Flush valve	No.	20		
xi.	2" Flush valve	No.	06		
xii.	PVC cement/solution	Liter	08		
4.	Others				
i.	1½" uPVC double union ball valve	No.	10		
ii.	2" uPVC double union ball valve	No.	08		
iii.	2" Pressure Release Valve	No.	02		
iv.	Pressure Gauge 1-10 Bar	No.	04		
v.	2" Flow Meter	No.	02		
vi.	1" Air release valve	No.	02		
vii.	2" Non return valve (NRV)	No.	02		
5.	Filtration System				
i.	Disc Filter 15-25 m ³ /h brand name (country of origin)	No.	02		
ii.	Hydro Cyclone Filter 15-25 m ³ /h brand name (country of origin)	No.	02		
6.	Fertigation System				
i.	Ventury Injector (1.5")	No.	02		
7.	Other items required (if any)				
8.	Installation charges	Per Acre	10 Acres		
Total Unit Cost (Rs.) (B)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

SPRINKLER IRRIGATION SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
1.	Sprinkler System				
i.	Rain Gun (1.5" base) 16 mm Flow (3 - 6 lps) Throw (60 - 110 ft) Trajectory Angle (greater than 20°) Operating Pressure (2-5 kg/cm ²) Working Method (Half Circle and Full Circle) Brand name : Origin of Assembly:	No.	02		
ii.	Rain gun tripod	No.	02		
iii.	GI Hydrant complete incl. Brass gate valve 1.5", Light Grade L2 GI with fittings	No.	08		
iv.	Flexible Canvas pipe Ø 2"	Meter	200		
v.	Civil Work				
vi.	Head Unit Foundation (1:2:4) (10x4x2ft)	No.	02		
vii.	Solar Panels Frame/Tracker Foundation Concreting along with steel cage (1:2:4) (2.5x2.5x4ft)	No.	06		
viii.	Sprinkler Hydrant Concreting (1:2:4) (1x1x3ft)	No.	08		
ix.	Sign Board with Concrete Foundation (1:4:8) (1x1x2ft) (Urdu)	No.	06		
2.	Other items required (if any)				
3.	Installation charges	Per Acre	08 Acres		
Total Unit Cost (Rs.) (C)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

VEGETATIVE COVER/SHELTER BELT

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
1.	Outer Most Row				
i.	Khagal Tree	Nos.	860		
2.	Middle Row				
i.	Khagal Tree	Nos.	850		
3.	Inner Most Row				
i.	Khagal Tree	Nos.	840		
	Installation charges	Rs./site	02 sites		
Total Unit Cost (Rs.) (D)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

Total Bid Price

Sr. No.	Items Description	Amount (Rs.)
1.	Solar Pumping System (A)	
2.	Drip Irrigation System (B)	
3.	Sprinkler Irrigation System (C)	
4.	Vegetative Cover/Shelter Belt (D)	
Total Unit Cost (Rs.) (A+B+C+D)		

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

LETTER OF TECHNICAL BID

The Project Director (ILWCP).
Pakistan Council of Research in Water Resources (PCRWR),
Khayaban-e-Johar, H-8/1,
Islamabad.

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents.
- (b) We offer to execute and complete in conformity with the Bidding Documents the following Works.

“Supply and Installation of Solar Pumping, Drip and Sprinkler Irrigation Systems alongwith the vegetative cover/shelter belt for nude lands to curb wind erosion in Thal Desert”.
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (d) As security for due performance of the under takings and obligations of our bid, we submit here with a Bid security, in the amount specified in Bidding Data Sheet, which is valid (at least) 28 days beyond validity of Bid itself.
- (e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process.
- (f) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith.

Name
In the capacity of
Signed

Duly authorized to sign the Bid for and on behalf of

Date:

Address.....

LETTER OF PRICE BID

The Project Director (ILWCP).
Pakistan Council of Research in Water Resources (PCRWR),
Khayaban-e-Johar, H-8/1,
Islamabad.

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents.
- (b) The total price of our Bid offered is:
Rupees

- (c) Our Bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (d) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents.
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.
- (f) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (g) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to verify any information provided in our Technical Bid which comprises all documents enclosed herewith.
- (h) If awarded the contract, the person named below shall act as Contractor's Representative.

Name
In the capacity of
Signed

Duly authorized to sign the Bid for and on behalf of
Date:
Address.....