

Standard Bidding Document

PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY (Goods)

National

Single Stage-One Envelope



September 29, 2026

Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT), Director

ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory

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INVITATION FOR PREQUALIFICATION FOR CLOSED FRAMEWORK AGREEMENT

PROCUREMENT OF GOODS

1. The **Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT)** has sufficient / has received / intends to apply for funds from **Non-ADP** and intends to apply part of such funds toward payments under the Framework Agreement for **PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY** having reference number **FFW10269**.

2. The **Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT)** intends to prequalify suppliers for subsequent Invitation to Bid(s) and to sign a Closed Framework Agreement with the successful bidder(s) following completion of the bidding process.

3. The objective of the intended Closed Framework Agreement is the on-demand supply of **PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY** through subsequent Call-Off Contract(s) during the Framework Agreement period. The purpose of this Prequalification Notice is to provide basic information to enable potential applicants to decide whether to respond to this Prequalification Notice.

4. Only the prequalified applicants shall be entitled to participate in the subsequent procurement proceedings. It is expected that Invitations to Bid will be issued to the Prequalified Applicants in **Tuesday, September 29, 2026**. The Closed Framework Agreement is expected to be signed with the successful bidder(s) in **Wednesday, September 30, 2026** for a period of **12 Months**.

5. The Prequalification process is open to all **National** Applicants subject to fulfilling the eligibility requirements specified in the Prequalification Documents. Interested Applicants may obtain further information from

Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT) through **EPADS v2.0** during office hours. A complete set of Prequalification Documents may be accessed by interested Applicants through **EPADS v2.0** at <https://epads.gov.pk/opportunities/federal/framework-agreements/10269>.

6. The application, prepared in accordance with the instructions contained in the Prequalification Documents, must be submitted through **EPADS v2.0** on or before **Friday, October 16, 2026 11:00 AM**. Applications will be opened electronically through **EPADS v2.0** on the same day at **Friday, October 16, 2026 11:30 AM**. Manual submission of applications shall not be entertained.

7. Vendors who have not yet registered on **EPADS v2.0** may complete their registration at <https://vendors.epads.gov.pk/>. Guidance regarding registration and bid submission is available on the portal.

In terms of Rule 48 of Public Procurement Rules, 2004, the Grievance Redressal Committee (GRC) has been notified for the subject procurement. The notification is available on the Procuring Agency's website and on PPRA's website.

Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT)

Director

ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory

+92-333-540-4351

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Instructions to Applicants

A. General

1. Scope of Application

1.1. In connection with the **“Invitation for Prequalification”**, the Procuring Agency, as defined in Section II (Prequalification Data Sheet abbreviated as PDS), issues this set of Prequalification Documents (PD) to prospective applicants (also hereinafter referred as Applicants) interested in submitting applications (also hereinafter referred as Applications) to determine the capacity and capability of the Applicant(s) for supply of Goods and Related Services incidental thereto as specified in Section VII (Schedule of Requirements).

2. Source of Funds

2.1. Source of funds is same as referred in Invitation for Prequalification.

3. Fraud and Corruption

3.1. The Procuring Agency requires that the Applicants /Bidders/ Suppliers/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such agreements and contracts.

3.2. The Applicants/Bidders shall permit and shall cause their agents (whether declared or not), sub-contractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Procuring Agency to inspect all accounts, records and other documents relating to any, Application/Bid submission, Primary Procurement process, Framework Agreement performance, Secondary Procurement process, and/or Call-off Contract performance (in the case of award of a Call-off Contract), and to have them audited by auditors appointed by the Procuring Agency.

3.3. Any communications between the Applicant and the Procuring Agency related to matters of alleged corrupt and fraudulent practices must be made in writing or in electronic forms that provide record of the content of communication.

3.4. Procuring Agency will reject an application or bid or proposal, if it is established that the Applicant or the Bidder or Prosper was engaged in corrupt and fraudulent practices in competing for the contract.

3.5. Procuring Agency will also declare the Applicant as blacklisted in accordance with Public Procurement Rule 19 and predefined standard mechanism.

4. Eligible Applicants

4.1. An Applicant may be a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing JV agreement or with the intent to enter into such an agreement supported by a letter of intent.

In case of single (private or state-owned entity), it shall be liable for execution of all the provisions of the Framework Agreement (if signed b/w the Procuring Agency and the entity), the execution of any Call-off Contract(s) awarded (to the entity) under the Framework Agreement in accordance with the Call-off Contract conditions that apply.

In the case of a joint venture, all members shall be jointly and severally liable for the execution of all the provisions of the Framework Agreement (if signed b/w the Procuring Agency and the JV), the execution of any Call-off Contract(s) awarded (to the JV) under the Framework Agreement in accordance with the Call-off Contract conditions that apply.

The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Prequalification process, Bidding process (in the event the prequalified JV submits a Bid) and during the period of framework agreement and contract execution (in the event the JV is awarded the Contract). Unless specified in the PDS, there is no limit on the number of members in a JV.

4.2. An Applicant may apply for Prequalification both individually, and as part of a joint venture, or participate as a subcontractor. If prequalified as a JV only, it will not be permitted to bid for the same contract as an individual entity. Bids submitted in violation of this provision will be rejected.

4.3. An Applicant and any of its affiliates (that directly or indirectly control, are controlled by or are under common control with that entity) may submit its Application for Prequalification either individually, as joint venture or as a sub-contractor among them for the same contract. However, if prequalified only one prequalified Applicant will be allowed to bid for the same contract. All Bids submitted in violation of this provision will be rejected.

4.4. Applicants shall be considered to have a conflict of interest, if they participated as a consultant in the preparation of the design or technical specifications or have been hired or proposed to be hired by the Procuring Agency for execution of subsequent Framework Agreement(s) or Call-off Contract(s). In addition, Applicants may be considered to have a conflict of interest if they have a close business or family relationship with such professional staff of the Procuring Agency (or a recipient of a part of the funds) who:

4.4.1. are directly or indirectly involved in the preparation of the Prequalification Documents or Bidding Documents or specifications of the Framework Agreement or Call-off Contract and/or the Prequalification or Bid evaluation process of such Contract; or

4.4.2. would be involved in the implementation or supervision of such Framework Agreement or Call-off Contract, unless the conflict stemming from such relationship has been resolved throughout the Procurement Process, Bidding process during the execution of the Framework Agreement and/or Call-off Contract.

4.5. An Applicant that has been declared debarred or blacklisted shall be ineligible to be prequalified to bid or enter into any Framework Agreement or Call-off Contract for such period of time and for such type of procurement for which he has been declared debarred or blacklisted. The list of debarred firms and individuals is available at PPRA's website.

4.6. An Applicant shall provide such documentary evidence for determining the eligibility of the Applicant to the reasonable satisfaction of the Procuring Agency.

5. Eligibility (in terms of Nationality)

5.1. Applicants may be ineligible if they are nationals of ineligible countries as indicated in Section V.

B. Contents of the Prequalification Documents

6. Sections of Prequalification Documents

6.1. This set of Prequalification Documents consists of Parts 1 and 2 which comprise all the sections indicated below, and which should be read in conjunction with any Addendum issued in accordance with ITA 8.

PART 1 Prequalification Procedures

6.2. Section I - Instructions to Applicants (ITA)

6.3. Section II - Prequalification Data Sheet (PDS)

6.4. Section III - Qualification Criteria and Requirements

6.5. Section IV - Application Forms

6.6. Section V - Eligible Countries

6.7. Section VI - Fraud and Corruption

PART 2 Supply Requirements

6.8. Section VII - Schedule of Requirements

6.9. The Procuring Agency accepts no responsibility for the completeness of the Prequalification documents, responses to requests for clarification, the minutes of the pre-Application meeting (if any), or Addenda to the Prequalification documents in accordance with ITA 8. In case of any discrepancies, documents issued directly through ePADS shall prevail.

6.10. The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Documents and to furnish with its Application all information or documentation as is required by the Prequalification Documents.

7. Clarification of Prequalification Documents and Pre-Application Meeting

7.1. An Applicant requiring any clarification of the Prequalification Documents shall contact the Procuring Agency in writing through ePADS. The Procuring Agency will respond in writing through ePADS to any request for clarification provided that such request is received no later than three (03) days prior to the deadline for submission of the Applications. The Procuring Agency shall forward a copy of its response to all prospective Applicants through ePADS who have obtained the Prequalification Documents from ePADS, including a description of the inquiry but without identifying its source. If so indicated in the PDS, the Procuring Agency shall also promptly publish its response through ePADS. Should the Procuring Agency deem it necessary to amend the Prequalification Documents as a result of a clarification, it shall do so in accordance with the provisions of ITA 16.2.

7.2. If indicated in the PDS, the Applicant's designated representative is invited at the Applicant's cost to attend a pre-Application meeting through online platform / ePADS as per date and time mentioned in the PDS. During this Pre-Application meeting, prospective Applicants may request clarification of the schedule of requirement, the qualification criteria or any other aspects of the Prequalification Documents.

7.3. Minutes of the Pre-Application meeting, if applicable, including the text of the questions asked by Applicants, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be transmitted promptly through ePADS to all prospective Applicants who have obtained the Prequalification Documents. Any modification to the Prequalification Documents that may become necessary as a result of the pre-Application meeting shall be made by the Procuring Agency exclusively through the use of an Addendum pursuant to ITA 8 and through ePADS. Non-attendance at the pre-Application meeting will not be a cause for disqualification of an Applicant.

8. Amendment of Prequalification Documents

8.1. At any time prior to the deadline for submission of Applications, the Procuring Agency may amend the Prequalification Documents by issuing an Addendum through ePADS.

8.2. Any Addendum issued shall be part of the Prequalification Document and shall be communicated in writing through ePADS to all Applicants who have obtained the Prequalification Documents from the Procuring Agency. The Procuring Agency shall promptly publish the Addendum at the Procuring Agency's web page and ePADS.

Provided that an Applicant who had already submitted their Applications prior to the issuance of any such addendum shall have the right to withdraw his already submitted Application and submit the revised Application prior to the original or extended Application submission deadline through ePADS.

8.3. To give Applicants reasonable time to take an Addendum into account in preparing their Applications, the Procuring Agency may at its discretion, extend the deadline for the submission of Applications in accordance with ITA 16.2:

Provided that the Procuring Agency shall extend the deadline for submission of Applications, if such an addendum is issued within last three (03) days of the Application submission deadline.

C. Preparation of Applications

9. Cost of Applications

9.1. The Applicant shall bear all costs associated with the preparation and submission of its Application. The Procuring Agency will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Prequalification process.

10. Language of Application

10.1. The Application as well as all correspondence and documents relating to the Prequalification exchanged by the Applicant and the Procuring Agency, shall be written in the language specified in the PDS. Supporting documents and printed literature that are part of the Application may be in

another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the PDS, in which case, for purposes of interpretation of the Application, the translation shall govern.

11. Documents Comprising the Application

11.1. The Application shall comprise the following:

11.1.1. **Application Submission Letter**, in accordance with ITA 12.1;

11.1.2. **Eligibility**: documentary evidence establishing the Applicant's eligibility, in accordance with ITA 13.1;

11.1.3. **Qualifications**: documentary evidence establishing the Applicant's qualifications, in accordance with ITA 14; and

11.1.4. any other document required as specified in the PDS.

12. Application Submission Letter

12.1. The Applicant shall complete an Application Submission Letter as provided in Section IV (Application Forms). This Form must be completed without any alteration to its format.

13. Documents Establishing the Eligibility of the Applicant

13.1. To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Letter and Form ELI-1.1 (eligibility), included in Section IV (Application Forms).

14. Documents Establishing the Qualifications of the Applicant

14.1. To establish its qualifications to perform the contract(s) in accordance with Section III (**Qualification Criteria and Requirements**), the Applicant shall provide the information requested in the corresponding Information Sheets included in **Section IV (Application Forms)**.

14.2. Wherever an Application Form requires an Applicant to state a monetary amount, Applicants should indicate the Pak Rupee equivalent using the rate of exchange determined as follows:

14.2.1. for turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted).

14.2.2. value of single contract - Exchange rate prevailing on the date of the contract.

14.3. Exchange rates shall be taken from the publicly available source identified in the PDS. Any error in determining the exchange rates in the Application may be corrected by the Procuring Agency.

14.4. The documentary evidence of the Applicant's qualifications to conclude a Framework Agreement, and/or to perform any Call-off Contract(s) if awarded, shall establish to the Procuring Agency's satisfaction:

14.4.1. that, if required in the BDS, an Applicant that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV A (Bidding Forms) to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Procuring Agency's Country;

14.4.2. that, if required in the BDS, in case of an Applicant not doing business within Islamic Republic of Pakistan (or the country where the procurement is being made), the Applicant is, or will be, (if awarded the call off contract) represented by an Agent in the country, equipped and able to carry out the Supplier's maintenance, repair, and spare parts stocking obligations in respect of the Goods.

D. Submission of Applications

15. Submission of the Applications through ePADS

15.1. The Bidder shall prepare and submit Bid with due diligence after carefully reading all the terms and condition before submission through ePADS in accordance with the procedures specified in the PDS.

15.2. In case the Applicant is a JV, the Application shall submit an authorized representative of the JV on behalf of the JV and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized signatories.

16. Deadline for Submission of Applications

16.1. Applicants shall be submitted through ePADS no later than the deadline indicated in the PDS.

16.2. If required in accordance with the provisions of ITA 8.3, the Procuring Agency will extend the deadline for the submission of Applications, in which case all rights and obligations of the Procuring Agency and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.

16.3. The deadline will be extended in the same manner as that of original Invitation for Prequalification (or the advertisement) through ePADS.

17. Opening of Applications

17.1. The Procuring Agency shall open all Applications on the date and time specified in the PDS through ePADS. Late Applications shall be treated in accordance with ITA 16.1.

E. Procedures for Evaluation of Applications

18. Confidentiality

18.1. Information relating to the Applications, their evaluation and results of the Prequalification shall not be disclosed to Applicants or any other persons not officially concerned with the Prequalification process until the notification of Prequalification results is made to all Applicants in accordance

with ITA 26 through ePADS.

18.2. From the deadline for submission of Applications to the time of notification of the results of the Prequalification in accordance with ITA 26, any Applicant that wishes to contact the Procuring Agency on any matter related to the Prequalification process may do so only in writing through ePADS.

19. Clarification of Applications

19.1. To assist in the evaluation of Applications, the Procuring Agency may, ask an Applicant for a clarification (including missing documents) of its Application, to be submitted within a stated reasonable period of time. Any request for clarification from the Procuring Agency and all clarifications from the Applicant shall be in writing through ePADS.

19.2. If an Applicant does not provide clarifications and/or documents requested by the date and time set in the Procuring Agency's request for clarification, its Application shall be evaluated based on the information and documents available at the time of evaluation of the Application.

20. Responsiveness of Applications

20.1. The Procuring Agency may reject any Application which is not responsive to the requirements of the Prequalification Documents. In case the information furnished by the Applicant is incomplete or otherwise requires clarification as per ITA 19.1, and the Applicant fails to provide satisfactory clarification and/or missing information within prescribed time, it may result in disqualification of the Applicant.

21. Margin of Preference

21.1. Unless otherwise specified in the PDS, a margin of preference shall not apply in the Bidding process resulting from this Prequalification.

22. Sub-contractors

22.1. Subcontractors' qualification and experience will not be considered for evaluation of the Applicant. The Applicant on its own (without taking into

account the qualification and experience of the Subcontractor) should meet the qualification criteria.

F. Evaluation of Applications and Prequalification of Applicants

23. Evaluation of Applications

23.1. The Procuring Agency shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements, to evaluate the qualifications of the Applicants, and no other methods, criteria, or requirements shall be used. The Procuring Agency reserves the right to waive minor deviations from the qualification criteria if they do not materially affect the technical capability and financial resources of an Applicant to perform the contract, however subject to the provisions of ITA 25.

23.2. Subcontractors proposed by the Applicant shall be fully qualified for their parts of the Scope of Supply of the Goods and Allied Services.

23.3. In case of multiple contracts, Applicants should indicate in their Applications the individual contract or combination of contracts in which they are interested. The Procuring Agency shall prequalify each Applicant for the maximum combination of contracts for which the Applicant has thereby indicated its interest and for which the Applicant meets the appropriate aggregate requirements. The Qualification Criteria and Requirements are mentioned in Section III.

23.4. Only the qualifications of the Applicant shall be considered. The qualifications of other related entities such as the Applicant's subsidiaries, parent entities, affiliates, subcontractors or any other firm(s) different from the Applicant shall not be taken into consideration in determining the qualifications of the Applicant.

24. Procuring Agency's Right to Accept or Reject Applications

24.1. The Procuring Agency reserves the right to accept or reject all the Applications, and to annul the Prequalification process at any time, without

thereby incurring any liability to the Applicants. However, the procuring agency shall record its reasons and justifications on ePADS, duly approved by the Principal Accounting Officer or Head of Organization.

25. Prequalification of Applicants

25.1. All Applicants whose Applications substantially meet or exceed the specified qualification requirements will be prequalified by the Procuring Agency.

25.2. An Applicant may be “conditionally prequalified,” that is, qualified subject to the Applicant submitting or correcting certain specified nonmaterial documents or deficiencies to the satisfaction of the Procuring Agency.

25.3. Applicants that are conditionally prequalified will be so informed along with the statement of the condition(s) which must be met to the satisfaction of the Procuring Agency before or at the time of submitting their Bids.

26. Notification of Prequalification

26.1. The Procuring Agency shall notify all Applicants in writing through ePADS indicating the names of those Applicants who have been prequalified or conditionally prequalified. In addition, those Applicants who have been disqualified will be informed separately through ePADS.

26.2. The procuring agency shall communicate to those suppliers or contractors who have not been pre-qualified the reasons for not pre-qualifying them through ePADS.

27. Request for Bids

27.1. Promptly after the notification of the results of the Prequalification, the Procuring Agency will invite the Bids from all the Applicants that have been prequalified through ePADS.

28. Changes in Qualifications of Applicants

28.1. Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 25 and invited to bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Procuring Agency prior to the deadline for submission of Bids. Such approval shall be denied if:

28.1.1. a prequalified Applicant proposes to associate with a disqualified Applicant or in case of a disqualified joint venture, any of its members;

28.1.2. as a consequence of the change, the Applicant no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria and Requirements; or

28.1.3. in the opinion of the Procuring Agency, the change may result in a substantial reduction in competition.

28.2. Any such change should be submitted to the Procuring Agency before the date of "Invitation to Bids".

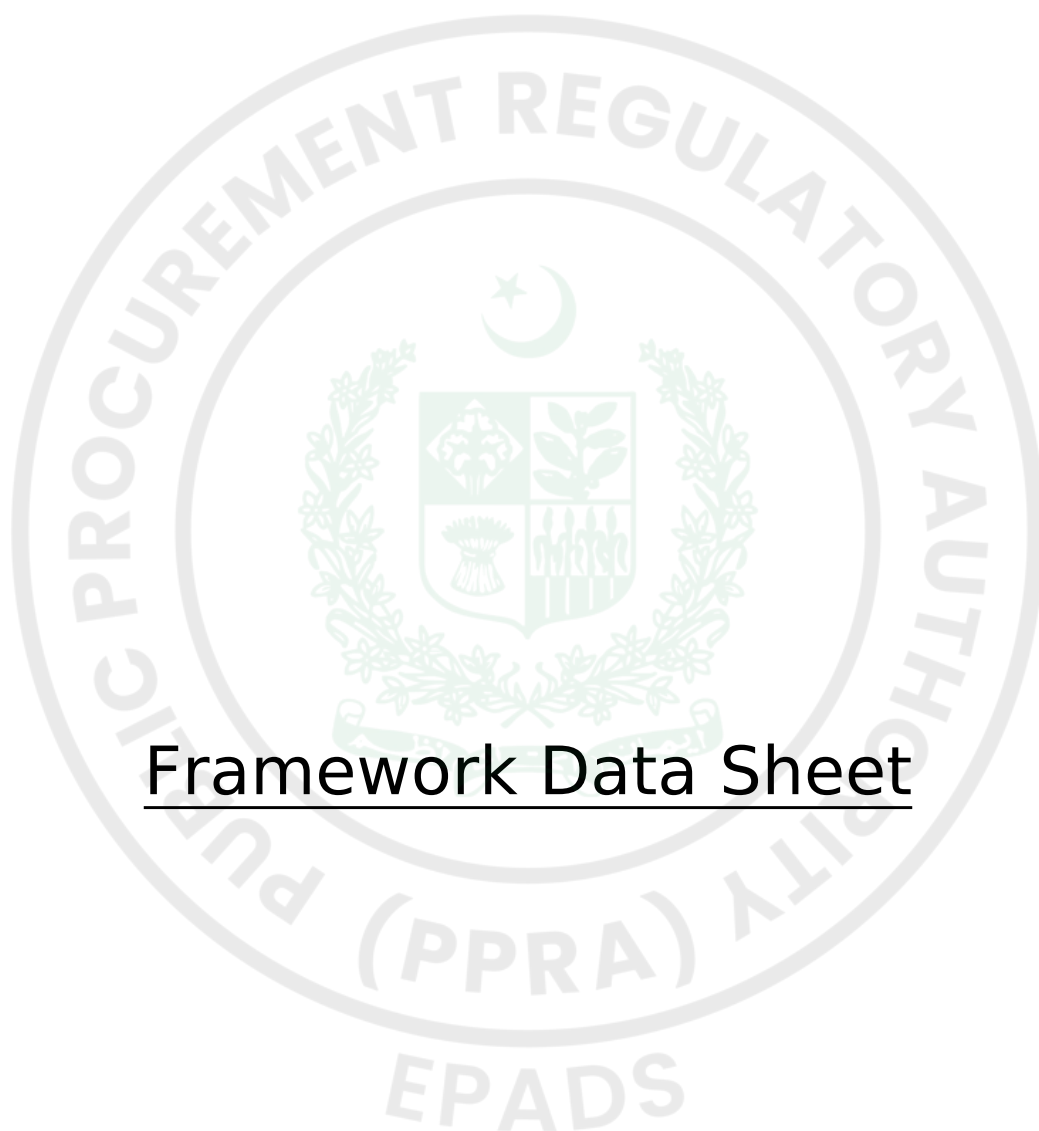
29. Redressal of Grievances

29.1. Procuring agency shall constitute a Grievance Redressal Committee (GRC) and proceed in accordance with the procedure and mechanism defined under Rule-65 of Public Procurement Rules, 2025.

29.2. The GRC shall not have any of the members of Procurement Evaluation Committee. The committee must have one subject specialist depending on the nature of the procurement.

30. Mechanism of Blacklisting

30.1. The procuring agency shall initiate blacklisting or debarment proceedings against any bidder, supplier or contractor in accordance with the mechanism prescribed under Rule-25 of Public Procurement Rules, 2025 read with "Mechanism for Blacklisting Regulations, 2024".



Framework Data Sheet

Framework Data Sheet (FDS)

The following specific data for the Framework Agreement shall complement, supplement, or amend the provisions in the Instructions to Applicants/Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

FDS Clause Number

ITB Number

Amendments of, and Supplements to, Clauses in the Instructions to Applicants/Bidders

A. General

FDS Clause Number 1

ITB Number 1.1

Identification Number of the Framework Agreement: **FFW10269**

The Procuring Agency is: **Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT)**

Framework Agreement Title: **PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY**

FDS Clause Number 2

ITB Number 2.1

The name of Procuring Agency is: **Productivity Enhancement Through Installation of Solar Powered High Efficiency Irrigation System in ICT (Water Management Department-ICT)**

The name of Framework Agreement is: **PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY**

FDS Clause Number 3

ITB Number 2.2

Participating / Authorized Procuring Agencies under this Framework Agreement:

FDS Clause Number 4

ITB Number 3.1

Framework Type: **Closed Framework Agreement**

FDS Clause Number 5

ITB Number 4.1

Framework Duration: **12 Months**

Commencement Date: **Expired after the framework duration of 12 months from the award date.**

Expiry Date:

Lot Title : Installation of Solar Pumping System 3.3 HP & 5.5 HP

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
SOLAR PHOTOVOLTAIC	Electric power system construction service	Address: ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory Schedule: 15 Days Quantity: 1/Qty	1 / Qty	Any	5 Year

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
PUMP CONTROLLER/VARIABLE FREQUENCY DEVICE (VFD)	Electric power system construction service	Address: ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory Schedule: 15 Days Quantity: 1/Qty	1 / Qty	Any	5 Year
SOLAR ARRAY PANEL STRUCTURE	Electric power system construction service	Address: ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory Schedule: 15 Days Quantity: 1/Qty	1 / Qty	Any	5 Year

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
SOLAR ARRAY WIRING	Electric power system construction service	Address: ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory Schedule: 15 Days Quantity: 1/Qty	1 / Qty	Any	5 Year
CONNECTORS AND POWER DISCONNECT	Electric power system construction service	Address: ICT Agriculture Complex Mauve Area G-11/4, Islamabad Capital Territory Schedule: 15 Days Quantity: 1/Qty	1 / Qty	Any	5 Year

FDS Clause Number 6

ITB Number 5.1

A list of debarred firms and individuals is available on PPRA website:
<https://ppra.gov.pk>

B. Contents of the Framework Document

FDS Clause Number 7

ITB Number 7.1

For clarification, the Applicant shall seek clarifications through: **EPADS v2.0**

FDS Clause Number 8

ITB Number 7.1 & 8.2

Information related to the Framework Agreement shall be published on: **EPADS v2.0**

FDS Clause Number 9

ITB Number 7.2

Pre-Bid Meeting: **Clarification Date: Wednesday, October 14, 2026**

C. Preparation of Applications / Bids

FDS Clause Number 10

ITB Number 10.1

This Framework Agreement Document has been issued in the language:
English

FDS Clause Number 11

ITB Number 11.1(d)

Additional documents to be submitted through **EPADS v2.0**:

No

FDS Clause Number 12

ITB Number 14.2

Source for determining exchange rates: **Not Applicable**

E. Submission of Applications / Bids

FDS Clause Number 18

ITB Number 16.1

Deadline for Bid Submission:

Day: **Friday**

Date: **Friday, October 16, 2026**

Time: **11:00 AM**

FDS Clause Number 19

ITB Number 17.1

Opening of Bids shall be conducted through: **EPADS v2.0**

Day: **Friday**

Date: **Friday, October 16, 2026**

Time: **11:30 AM**

Virtual participation link: **<https://vendors.epads.gov.pk/>**

F. Evaluation and Award

FDS Clause Number 20

ITB Number 21.1

Margin of Domestic Preference: **Not Applicable**

FDS Clause Number 21

ITB Number 22.1

Framework Award Basis: **Least Cost Based Selection (LCBS)**

FDS Clause Number 22

ITB Number 23.1

Suppliers admitted to the Framework Agreement shall not be guaranteed any minimum quantity, value, or volume of business unless otherwise stated in the Framework Agreement.

FDS Clause Number 23

ITB Number 29.1

Framework-related complaints / grievances shall be submitted in writing through: **EPADS v2.0**

A complaint may challenge:

- The terms of the Framework Agreement Documents
- The Procuring Agency's evaluation decision
- The Procuring Agency's Framework Award decision

Framework Items / Lots

Brief Description

For Brief description see Annex-A.

Eligibility & Qualification Criteria

Bidder's Type	Required Registration
Individual / Individual Consultant	FBR (NTN)
Sole Proprietorship	FBR (GSTN)
Partnership Firm	PEC
Company (Private Limited)	
Company (Public Limited)	
Company (Holding Company)	
Company (Limited by Guarantee)	

Eligibility Criteria	Document
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The firms (having capacity to deliver the complete package of services including survey, design, supply of equipment/ materials, installation & commissioning and post installation back up support during the warranty with the following strength/ eligible for qualification as SSC for fiscal year 2026-27:-	No
Fixed Price: The prices indicated in the Financial Bid are firm and fixed and not subject to any adjustment during contract performance.	No
Must have an office in the ICT and have/ willing to establish at least One (1) sub-offices/ dealerships/ after sales service centers in the Twin cities (Islamabad, Rawalpindi)	Yes
Must be in solar business for last three years;	Yes
v. Must have experience of completing similar assignments preferably installation of at least 10 solar powered water pumping systems during last three (03) years (Attach following documents to justify the experience claim): □ List of completed and on-going projects with location, components, size/scope, cost, period and share/ role (in case of joint venture) □ List of Clients □ Type of Solar systems installed Any additional document to support relevant experience	Yes
Must possess inventory of solar equipment as per standards & specifications approved by the Water Management Department ICT. The Bidder shall submit the Bill of Quantities (BOQ) strictly in the prescribed format provided in the tender documents. Any BOQ submitted in a format other than the prescribed format, or with any alteration/deviation therein, shall be liable to rejection and shall not be entertained for evaluation.	Yes
Must have mix of professional staff at least 5 agricultural engineers (Provide list of staff and their CVs indicating qualifications, their registration with professional institutions & relevant experience supported by relevant documents.	Yes
Must attached acceptable document like financial statements, tax declaration / returns etc of last three years	Yes

Must be manufacturer or sole distributor or authorized dealer of specific make of solar systems meeting approved technical specifications of the water Management Department and must agree to supply compatible complete unit including PV panels and essential accessories (Attach valid sole distributor certificate, complete specifications of PV panels and required accessories along with origin certificate of equipment, brochure etc.);	Yes
The bidder/contractor shall maintain sufficient stock of all required materials and equipment in its warehouse to cater for at least 15 sites, in accordance with the approved specifications and standards of the Water Management Department. The available stock shall be subject to physical verification by the Department's approved Technical Committee. The Technical Committee shall have the right to visit the bidder's/contractor's warehouse at any time, as required, for inspection and verific	Yes
Pakistan Engineering Council (PEC) Registration in C4 or above Category with relevant codes e.g. (EE04, EE06, EE11)	Yes
Must have an Alternative energy development Board (AEDB) registration C-3 or above category	Yes
Must provide affidavit confirming that (a) applicant firm / joint venture have never been blacklisted by any government department. (If ever blacklisted, then provide the case history, current status of the firm regarding this decision) (b) all the information provided by the applicant firm/ joint venture are correct (c) the firm will provide compatible solar equipment as per approved standards & specifications and (d) the firm will deploy staff as per project requirement/ directions of the Clie	Yes
The Client reserves the right to terminate or cancel the contract and, subject to the applicable procurement rules and contractual provisions, award the remaining work to the next highest-ranked/evaluated responsive bidder in the event that the Contractor fails to comply with the specified terms and conditions, technical requirements, approved standards, or fails to meet the stipulated deadlines within the prescribed time period.	Yes
DELIVERY, INSTALLATION AND COMMISSIONING: The Contractor shall complete delivery, installation, testing and commissioning of the complete solar pumping system at each designated farmer site within thirty (45) days from the date of issuance of the work order, unless otherwise specified in the Contract.	No

WARRANTY: All equipment and materials supplied under the Contract shall be covered by the manufacturer's warranty and the Contractor's warranty obligations specified in the Tender Document. Unless a longer period is specified for a particular item, the minimum warranty period shall be twelve (12) months from successful commissioning/acceptance. The bidder shall state the warranty period and terms for each major component.	No
Packaging and Marking Instructions: The contractor shall properly pack all the material and mark as well to ensure safe delivery at consignee's place. Safe delivery at consignee's place is the sole responsibility of the contractor. Only material duly inspected by the team shall be allowed for installation.	No
FAILURE TO PERFORM: The Procuring Agency may take contractual action, including termination, encashment of applicable security and/or other remedies available under the Contract and applicable rules, if the Contractor fails to deliver, install, test, commission or warrant the Goods/Works in accordance with the Tender Document.	No
Rejection of Bid: Bid(s) not conforming to the above terms and conditions shall be rejected being non-responsive.	No

Evaluation Criteria

Least Cost Based Selection (LCBS)

Call-Off / Secondary Procurement Procedure





Annexure

Annex-A

Information (Read-Only)

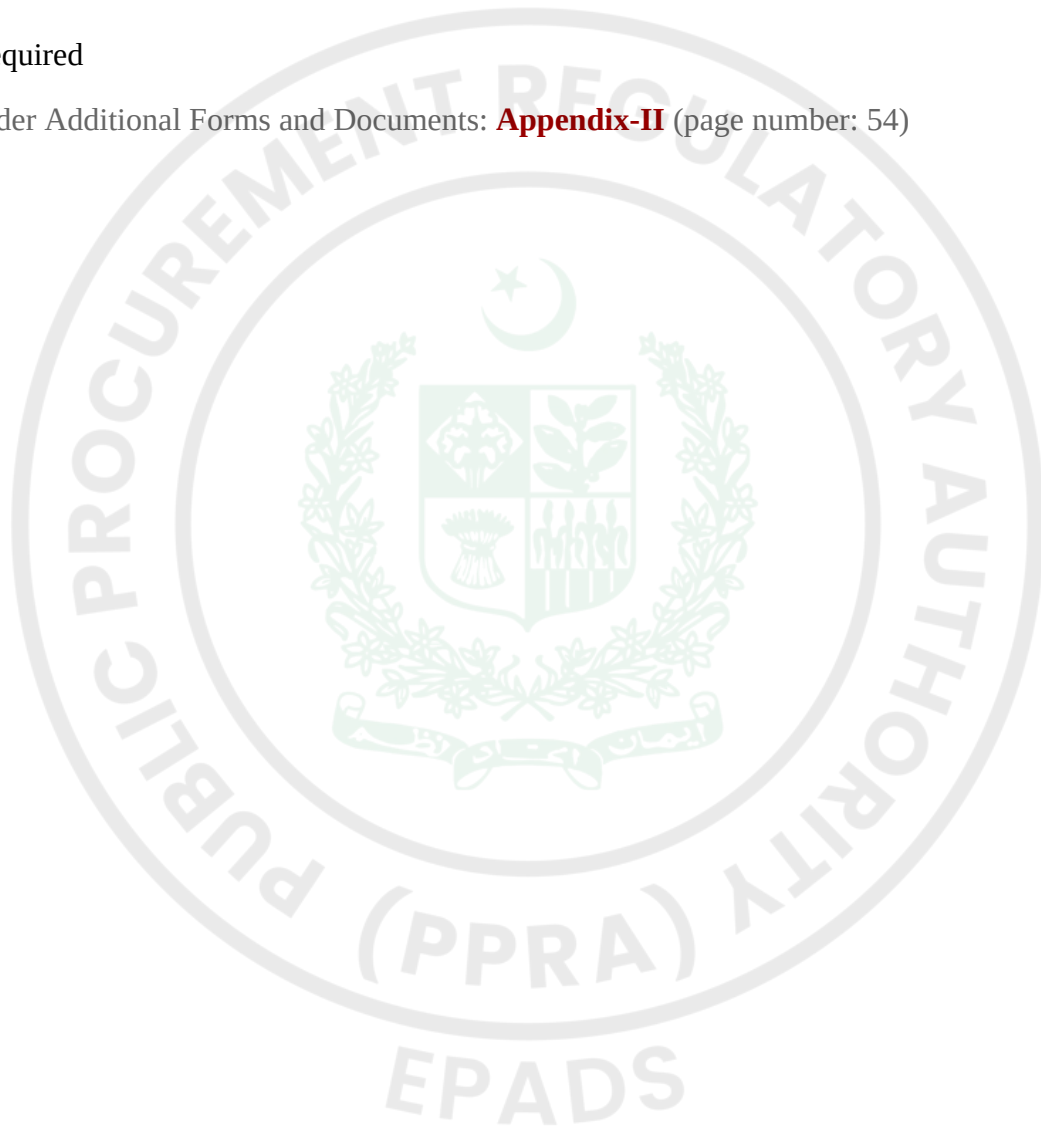
See Form Under Additional Forms and Documents: **Annex-A** (page number: 35)

Appendix-II

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Appendix-II** (page number: 54)





Procurement Forms







Additional Forms and Documents

TENDER DOCUMENT

[PQD]

FOR

TENDER FOR SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND WARRANTY SUPPORT OF SOLAR POWERED PUMPING SYSTEMS FOR HIGH EFFICIENCY IRRIGATION SYSTEMS ON FARMER FIELDS UNDER PRODUCTIVITY ENHANCEMENT THROUGH INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY

UNDER

**PRODUCTIVITY ENHANCEMENT THROUGH
INSTALLATION OF SOLAR POWERED HIGH
EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD
CAPITAL TERRITORY**



**DIRECTORATE OF AGRICULTURE EXTENSION
SERVICES ISLAMABAD
MAUVE AREA G-11/4 ICT ISLAMABAD**

1. INTRODUCTION

Agriculture remains a cornerstone of Pakistan's economy, with water serving as its most critical input. In the face of increasing water scarcity and rising demand, efficient water management has become imperative. "The Productivity Enhancement through Installation of Solar Powered High Efficiency Irrigation System in Islamabad Capital Territory (ICT)" project aims to address these challenges by promoting the sustainable use of water resources and improving agricultural productivity in the region. Water resource development is both time-consuming and capital-intensive. Therefore, the emphasis must shift towards conservation strategies that optimize the use of existing resources. These include minimizing conveyance losses and adopting irrigation practices aligned with the actual water needs of crops and orchards, in both irrigated and rain fed areas.

Water resource development is both time-consuming and capital-intensive. Therefore, the emphasis must shift towards conservation strategies that optimize the use of existing resources. These include minimizing conveyance losses and adopting irrigation practices aligned with the actual water needs of crops and orchards, in both irrigated and rain fed areas. Key interventions under this project include the construction of farm ponds, development of irrigation schemes, and provision of solar systems for irrigation. These measures are designed to not only improve water use efficiency but also to significantly enhance the livelihoods of local farming communities. By promoting the use of solar-powered irrigation technologies, the project will reduce dependency on traditional energy sources and ensure uninterrupted water supply for farming activities.

In addition to infrastructure development, the project places strong emphasis on capacity building. Through training sessions and field demonstrations, both farmers and technical staff will be equipped with the knowledge and skills necessary to implement and maintain high-efficiency irrigation systems. The project also aims to create widespread awareness among farmers about modern land and water conservation techniques. The anticipated outcomes of this project include:

- Efficient conservation and utilization of water resources
- Shifting cropping patterns from traditional to high-value crops

- Increased agricultural production and improved quality of produce

The cumulative impact of these outcomes will lead to increased profitability for farming enterprises, improved incomes, and better livelihoods for the rural population in ICT. Furthermore, the project will make significant contributions toward food security and environmental sustainability through the effective use of water from perennial nullahs, dug wells, mini dams, and tube wells.

In summary, this project represents a strategic initiative to modernize agriculture in Islamabad Capital Territory by integrating renewable energy solutions with efficient irrigation practices—laying the groundwork for a more resilient and productive agricultural sector.

2. PROJECT OBJECTIVES

The objective of the project is to promote an environment friendly, socially sustainable, resource efficient, and economically profitable irrigated agriculture in ICT area through integrated development and management of available water resources by strengthening small landholder's resilience to the climate change. The broad objectives of the project are:

- Utilization of natural resource (Land & Water) more effectively & efficiently through development of ground water resources.
- Enhancing farm income & conservation of natural resources by using water conservation technologies.
- Energy saving through installation of solar powered pumping system.
- Generate livelihood & enhance socio economic condition of the farmers.
- Capacity building of the farmers for better & effective utilization of land & water resources.
- Enhancement of Job opportunities.
- Increase in water & farm productivity.

3. MAJOR COMPONENTS OF THE PROJECT:-

The technologies under the proposed project will result in productivity enhancement, efficient resource management, crop diversification, better quality produce and promotion of environment friendly free energy source. Major activities to be carried out under the proposed project would include, inter alia, the followings.

Creation of awareness and mobilization of farmers to adopt Hi-Tech agriculture technologies for crop and water productivity enhancement.

Provision of Solar Systems to the farmers for operating High Efficiency Irrigation Systems. Support farmers for improvement of water conveyance efficiency by providing lift irrigation schemes.

4. Physical Implementation Plan

- **Formal Agreement:** A structured agreement will be executed between the farmer and the Water Management Department. This document will clearly define the mutual roles, responsibilities, and obligations of both parties throughout the project's implementation.
- **Engineering Surveys:** The Water Management Department, in coordination with the project consultant, will conduct comprehensive engineering surveys to assess site-specific conditions such as land topography, water availability, soil characteristics, and suitability for the proposed irrigation or solar pumping interventions. This process will also include evaluating existing infrastructure, identifying potential technical challenges, and confirming overall site feasibility. Once the survey findings and feasibility assessments are thoroughly reviewed and validated by the consultant, Based on this verified information, the Project Director (PD) will issue the formal technical sanction required to proceed with physical implementation.
- **Technical Assistance During Construction:** Throughout the construction and installation process, successful bidder/contractor and technical consultant, supported by the Department, will provide on-site guidance, technical supervision, and troubleshooting to ensure quality and compliance with approved designs and standards.
- **Selection and Installation of Solar Pumping Systems:** Farmers will be required to install solar pumping systems through a successful bidder/contractor. These firms will have been selected through a competitive technical and financial bidding process to ensure quality service, transparency, and value for money.
- **Implementation of Drip/Sprinkler and Lift Irrigation Systems:** Farmers may choose to execute Drip, Sprinkler, and Lift Irrigation System works on a self-help basis. After completion, the installations will be inspected and vetted by the project consultants. Once the work is certified as satisfactory, the farmer will receive reimbursement of 80% of the total cost.
- **Reimbursement Conditions:** Both contractor payments and farmer reimbursements will only be processed after thorough verification by project consultants, ensuring compliance with technical specifications and approved scope of work.
- **Timeline for Installation:** All successful bidder/contractor is required to complete the installation works within 45 days from the date of issuance of the work order. Strict adherence to timelines will be monitored to avoid delays and ensure timely project delivery.

Financial Procedures

- **Solar Pumping Systems:**
 - o Farmers will pay their 20% share directly to the successful bidder/contractor.
 - o Upon completion and verification by consultants, 70% of the Government share will be released to the firms.
 - o The remaining 10% will be retained as a performance security for one year.

Farmers' Participation and Contribution: -

Farmers will be motivated and their local resources will be mobilized to seek their active participation in the execution of the project.

For installation of Solar Pumping System (3.3HP & 5.5HP) at Ponds, Nullah, Mini Dam, and Dug Wells, Tender will be made who fulfill the criteria as under:-

Bids shall be submitted under PPRA Rule 36(b), Single Stage–Two Envelope Procedure. Each bid shall comprise a Technical Proposal and a Financial Proposal submitted separately in accordance with the Tender Document and the EPADS submission requirements.

This Tender is for the supply, installation, testing, and commissioning and warranty support of solar-powered pumping systems (3.3 HP and 5.5 HP) at ponds, nullahs, mini dams and dug wells in Islamabad Capital Territory. Detailed quantities and technical requirements are provided in Appendix-I.

3. Under PPRA rule 36(b) Single stage two envelope procedure (single envelope containing separately financial proposal and technical proposal)
4. Bid(s) in the required format should be addressed and submitted through EPADS.

Director Agriculture Extension Services
Water Management Department, ICT, Islamabad.
ICT Agriculture Complex Mauve Area G-11/4
ICT, Islamabad
Tel: 051-9108386 / 9108390

5. Bid should be accompanied by adequate technical documentation and catalogue(s) and other printed material or pertinent information for each item quoted.

6. Your bid shall be uploaded at EPADS and may be delivered at the address indicated at Paragraph 4 latest by -----hours on ----- received bids will be opened on the same date at ----- hours in the presence of bidders who may choose to attend

7. CLARIFICATIONS: Bidders may seek clarification regarding the Tender Document in writing through the prescribed EPADS mechanism within the period stated in the Bid Data Sheet. Clarifications and responses issued by the Procuring Agency shall form part of the Tender Document.

8. SUBMISSION OF BID: The Technical and Financial Proposals shall be submitted in the prescribed formats and in accordance with the Instructions to Bidders, Technical Specifications, BOQ and Conditions of Contract. The successful bidder shall execute the Contract/Work Order in the prescribed form.

PRICES: The prices should be quoted in the PAK Rupees including all taxes cost of delivering to, installing and commissioning at the place of farmers sites mentioned latter on

BID SECURITY: 5 % Bid Security of in shape of CDR/Pay Order / Demand Draft in favor of Director Agriculture extension services (AES) ICT, Islamabad shall be attached with the

bid. Bids without bid security shall be rejected as non-responsive. The successful bidder shall furnish a Performance Security/Guarantee of 10% of the contract amount, in the form and within the period specified in the Contract. Release of Performance Security shall be governed by the Contract and applicable PPRA rules.

PROPOSAL EVALUATION: The evaluation of proposals will be carried out on the basis of applicant firm(s) responsiveness to the eligibility criteria/ requirement in Annex-I. A Procuring Committee (PRC) of the Department will evaluate the proposals and decide about acceptance/ rejection of the proposals. Any misinformation, false and forged statement will lead to disqualification from being shortlisted/ pre-qualified and any other action as per the applicable law. Offers determined to be substantially responsive to the technical specifications will be evaluated by comparison of their prices by converting their Ex-Works price, including the cost of delivery, installation and commissioning to the place of destination. The award shall be made to the most advantageous bid among technically responsive bids, in accordance with the evaluation criteria stated in the Tender Document and applicable PPRA rules.

TECHNICAL AND FINANCIAL EVALUATION: Under the Single Stage–Two Envelope Procedure, the Technical Proposal shall be opened and evaluated first without reference to price. Only technically responsive bids shall proceed to financial evaluation. Financial Proposals of technically non-responsive bidders shall be handled in accordance with PPRA rules and the Tender Document. The final award shall be made to the most advantageous technically responsive bid in accordance with the pre-disclosed evaluation criteria. The technical committee reserves the right to select and finalize the applicable Bill of Quantities (BOQ) based on the type and capacity of the pump set and the corresponding solar PV system required for the project.

BID VALIDITY: Bids shall remain valid for a period of _____ (_____) calendar days from the deadline for submission of bids, or for such period as specified in the Bid Data Sheet.

10. Further information can be obtained from:

Directorate of Agriculture Extension Services
Water Management Department ICT Islamabad
ICT Agriculture complex Mauve Area G-11/4
ICT, Islamabad
Tel: 051-9108386 / 9108390

Annex-I

TERMS AND CONDITIONS OF SUPPLY

Project Name: INSTALLATION OF SOLAR POWERED HIGH EFFICIENCY IRRIGATION SYSTEM IN ISLAMABAD CAPITAL TERRITORY

Purchaser: Water Management Department ICT Islamabad

1. Prices and Schedules for Supply: Technical bid and Prices (Financial Bid) of all the items given at Appendix-I shall be quoted as per format given at Appendix-II and III, respectively.
2. Fixed Price: The prices indicated in the Financial Bid are firm and fixed and not subject to any adjustment during contract performance.
5. **ELIGIBILITY CRITERIA FOR QUALIFICATION: The firms (having capacity to deliver the complete package of services including survey, design, supply of equipment/ materials, installation & commissioning and post installation back up support during the warranty with the following strength/ eligible for qualification as SSC for fiscal year 2026-27:-**
 - i. The local firms are encouraged and in case of joint venture of local firm with foreign principal, the experience of later elsewhere in the world may be considered. The joint venture agreement would be required for the purpose;
 - ii. Must have an office in the ICT and have/ willing to establish at least One (1) sub-offices/ dealerships/ after sales service centers in the Twin cities (Islamabad, Rawalpindi)
 - iii. **Must be registered with EPADS Income Tax and Sales Tax Department s (Attach NTN & STN Registration Certificates supported by active NTN& STN);**
 - iv. Must be in solar business for last three years;
 - v. Must have experience of completing similar assignments preferably installation of at least 10 solar powered water pumping systems during last three (03) years (Attach following documents to justify the experience claim):
 - List of completed and on-going projects with location, components, size/scope, cost, period and share/ role (in case of joint venture)
 - List of Clients
 - Type of Solar systems installedAny additional document to support relevant experience

vi. Must possess inventory of solar equipment as per standards & specifications approved by the Water Management Department ICT.

The Bidder shall submit the Bill of Quantities (BOQ) strictly in the prescribed format provided in the tender documents. Any BOQ submitted in a format other than the prescribed format, or with any alteration/deviation therein, shall be liable to rejection and shall not be entertained for evaluation.

vii. Must have mix of professional staff at least 5 agricultural engineers (Provide list of staff and their CVs indicating qualifications, their registration with professional institutions & relevant experience supported by relevant documents).

viii. Must attached acceptable document like financial statements, tax declaration / returns etc of last three years

ix. Must be manufacturer or sole distributor or authorized dealer of specific make of solar systems meeting approved technical specifications of the water Management Department and must agree to supply compatible complete unit including PV panels and essential accessories (Attach valid sole distributor certificate, complete specifications of PV panels and required accessories along with origin certificate of equipment, brochure etc.);

x. The bidder/contractor shall maintain sufficient stock of all required materials and equipment in its warehouse to cater for at least 15 sites, in accordance with the approved specifications and standards of the Water Management Department. The available stock shall be subject to physical verification by the Department's approved Technical Committee. The Technical Committee shall have the right to visit the bidder's/contractor's warehouse at any time, as required, for inspection and verification of the available stock and its compliance with the approved standards.

xi. Pakistan Engineering Council (PEC) Registration in C4 or above Category with relevant codes e.g. (EE04, EE06, EE11)

xii. Must have an Alternative energy development Board (AEDB) registration C-3 or above category

Xiii. Must provide affidavit confirming that (a) applicant firm / joint venture have never been blacklisted by any government department. (If ever blacklisted, then provide the case history, current status of the firm regarding this decision) (b) all the information provided by the applicant firm/ joint venture are correct (c) the firm will provide compatible solar equipment as per approved standards & specifications and (d) the firm will deploy staff as per project requirement/ directions of the Client; and

XVI. The Client reserves the right to terminate or cancel the contract and, subject to the applicable procurement rules and contractual provisions, award the remaining work to the next highest-ranked/evaluated responsive bidder in the event that the Contractor fails to comply with the specified terms and conditions, technical requirements, approved standards, or fails to meet the stipulated deadlines within the prescribed time period.

4. DELIVERY, INSTALLATION AND COMMISSIONING: The Contractor shall complete delivery, installation, testing and commissioning of the complete solar pumping system at each designated farmer site within thirty (45) days from the date of issuance of the work order, unless otherwise specified in the Contract.

5. WARRANTY: All equipment and materials supplied under the Contract shall be covered by the manufacturer's warranty and the Contractor's warranty obligations specified in the Tender Document. Unless a longer period is specified for a particular item, the minimum warranty period shall be twelve (12) months from successful commissioning/acceptance. The bidder shall state the warranty period and terms for each major component.

6. Packaging and Marking Instructions: The contractor shall properly pack all the material and mark as well to ensure safe delivery at consignee's place. Safe delivery at consignee's place is the sole responsibility of the contractor. Only material duly inspected by the team shall be allowed for installation.
7. Required Technical Specifications: As given at Appendix-I
- (i) General Description
 - (ii) Specific details and technical standards
 - (iii) Performance Parameters
- Contractor confirms compliance with above specifications. In case of deviations, the bidders shall list all such deviations while submitting their technical bid.
9. FAILURE TO PERFORM: The Procuring Agency may take contractual action, including termination, encashment of applicable security and/or other remedies available under the Contract and applicable rules, if the Contractor fails to deliver, install, test, commission or warrant the Goods/Works in accordance with the Tender Document.
10. GST/NTN Registration: The bidder shall be registered EPADS for GST and NTN with Sales Tax and Income Tax departments and attach latest GST/NTN active/operative status certificate.
11. Rejection of Bid: Bid(s) not conforming to the above terms and conditions shall be rejected being non-responsive.

PROPOSAL SUBMISSION: Bids shall be submitted electronically through EPADS by the date and time specified in the Bid Data Sheet. Late bids shall not be considered.

NAME OF CONTRACTOR _____

Authorized Signature _____

Place:

Date:

ATTACHEMENTS

Documents	Details	Remark
Pump Flow Cruves	Pump flow curves against Pump flow rate (LPH) vs power (kW) at various heads (m) as annexure "C"	
Structural Drawing Details	The solar panel array structural drawings and dimensions as annexure 'D'	
Approved Drip Design	Approved design of drip imgation system as annexure E	
Photovoltaic System Sizing (if any)	The Solar PV sizing simulation to be attached as annexure 'F'	
Solar Site Mapping	Google earth kmz file with PV panel land utilization as annexure "G"	
Schematic Diagram	SLDs of the design solar PV system as annexure 'H'	
Photovoltaic Module and VFD Borchure	Approved and certified Photovoltaic Module and VFD Borchure as annexure T and 'J' respectively	
Structure Drawing Certification from certified Structural and/or Mechanical Engineer (in case of variation from approved specs)		

Appendix-I
TECHNICAL SPECIFICATION OF SOLAR PHOTOVOLTAIC MODULE

Sr. No.	Item/Feature	Specifications
1.	Application	To absorb the sunlight as a source of energy to generate electricity.
2.	Nominal Power (Watt)	≥ 585 (N-Type)
3.	Solar Cell	Bifacial, TOPCON, Mono/poly Perc
4.	Module Efficiency (%)	≥ 21
5.	Power Tolerance	Positive Tolerance Only
6.	Operating Temperature	-40°C to $+85^{\circ}\text{C}$
7.	International Standards Compliance	IEC 61215, IEC 61730
8.	Identification	Barcode
9.	Labeling and Import Data	Name of Manufacturer, Unique Model Number and Serial Number, Maximum Performance Pmax, Maximum Power Voltage Vmp, Maximum Power Current Imp, Open Circuit Voltage Voc, Short Circuit Current Isc, Month and Year of Manufacturing (the age of the module must not be more than one year at the time of installation).
10.	Junction Box	PVC
11.	Junction Box Standard	IP67 and Above
12.	Performance Warranty	25 Years i.e. Insurance backed warranty (Manufacturer warranty on letter head), global irrevocable and immediate insurance-backed with 3rd party policy rights of operation. Performance warranty will be linear.
13.	Materials and Workmanship Warranty	Free: 12 Years or above
14.	Power Output Warranty	Power output within 10 years Shall not fall below 90%. Power output within 25 years Shall not fall below 80%.
15.	Degradation	Anti-Potential Induced Degradation (PID)
16.	Origin	Imported
17.	Temperature Co-efficient of Maximum Power (Pmax)	$\leq -0.43\% / ^{\circ}\text{C}$
18.	Minimum Efficiency at 200W/m ² (25°C, AM 1.5)	Equal to or more than 95% of the module efficiency at STC.
19.	Connector	MC4 Equivalent connectors.

**TECHNICAL SPECIFICATIONS OF PUMP CONTROLLER/VARIABLE
FREQUENCY DEVICE (VFD)**

Sr. No.	Item/Feature	Specification
1	Application	Converts D.C. voltage to A.C. voltage and regulates the functions of the pump
2	Standard Compliance	IP65 or above
3	Efficiency	≥95 %
4	Type	Wall mounted
5	Free warranty period	02 years from the date of certification including replacement and O&M service or more as provided by manufacturer.
6	Built-in functions	Variable Frequency Drive. Automatic Start and Stop with any input power (solar, Grid and Generator). Self-diagnostic and self-Protection. Multi-string input with failure. Dry run protection detection. MPPT (Maximum Power Point Tracking).
7	Controls	Digital controls with complete protective functions. Instantaneous output status display (Speed / Power /Amps) etc. Intelligent Power module (IPM) with LED displays or external display through smart phone for operating system. Data logging (Optional). Ground fault monitoring.AC short circuit protection. Under/Over Voltage & Over Current protection. Low Voltage Disconnect (LVD). Overcharge Protection. Reverse Current Blocking.
8	Temperature range	-10 to + 60 degree Celsius
9	Rated output voltage	A.C. and D.C. rated voltage (single/three phase)/rated voltage matching with the motor.
10	Origin	Imported

TECHNICAL SPECIFICATIONS OF SOLAR ARRAY PANEL STRUCTURE

Sr. No.	Specification	Minimum Requirement
1	Application	Ground-mounted structure for 585 W solar PV modules
2	Structure Type	Fixed-tilt, ground-mounted
3	Main Structure	L2 & L3 galvanized steel sections
4	Steel Thickness	14 Gauge minimum
5	Material	Mild Steel / GI structural steel
7	Wind Load	Designed for minimum 150 km/h wind speed
8	Fasteners	SS-304 minimum, corrosion-resistant
9	Bracing	Adequate diagonal, longitudinal & transverse bracing
10	Foundation	RCC foundation designed according to site/soil conditions
11	Anchor Bolts	Galvanized/SS anchor bolts of approved size
12	Earthing	Complete metallic structure to be properly bonded and earthed
13	Tilt & Orientation	Optimized for Islamabad solar conditions
14	Structural Design	Structural calculations and wind-load analysis mandatory
15	Drawings	GA, fabrication and foundation drawings to be submitted
16	Alignment	Structure shall be level, plumb, rigid and properly aligned
17	Design Life	Minimum 25 years
18	Structural Warranty	Minimum 10 years
19	Quality Certificates	Material and galvanization certificates required
20	Installation	Complete supply, fabrication, transportation and erection
21	Standards	Applicable IEC and relevant structural/building standards
22	Contractor Responsibility	Complete structure including all accessories, fittings and civil works

Solar PV Mounting Structure: Ground-mounted fixed-tilt structure suitable for 585 W PV modules, fabricated from 14-gauge minimum L2/L3 galvanized steel sections, with minimum 90-micron zinc coating, designed for a minimum wind speed of 150 km/h. The structure shall include adequate bracing, corrosion-resistant SS-304 fasteners, RCC foundations, anchor bolts, structural earthing/bonding and all necessary accessories. Complete structural design calculations, wind-load analysis, fabrication drawings and foundation drawings shall be submitted for approval. The structure shall have a minimum 25-year design life and 10-year structural warranty.

TECHNICAL SPECIFICATIONS OF SOLAR ARRAY WIRING

Sr. No	Item/Feature	Specification
1	Application	To carry current
2	Type	Single conductor type, 99.99% Copper, Cross-sectional area of 4 mm ² or higher, 1000 V/Class II (according to protection class II /1000V, single core cable, linned copper conductor, XLPE insulation, double EVA jacket (resistant to heat and cold, resistant to heat and cold, resistant to ozone, UV, oil and chemicals), Temperature range:-40 to 90 °C (temperature peak allowable:120 °C), Halogen free, DC cables shall be suitable for the environmental conditions at the Project site, including UV protection and rodent protection.
3	Color Coding	Positive: Red or brown. Negative : Black or blue
4	Cable Losses	Ohmic losses less than 1% for DC cables and 0.5% for AC cables
5	Cable binders	Cable, cable binders, clamps and other fixing material must also be UV-resistant, made of polyethylene.
6	Standard	ISO 9001:2015
7	Origin	Imported/ Local

TECHNICAL SPECIFICATION OF CONNECTORS AND POWER DISCONNECT

Sr. No	Item/Feature	Specification
1	Application	To connect and disconnect the power and to enclose them in proper housing
2	Ingress Protection	IP 54 or higher for breaker box
3	Voltage	Have voltage ratings greater than the maximum circuit voltage
4	Current	Have current ratings between 125% and 150% of the maximum design current for the circuit
5	Display	All power disconnect should include a clear visual indication of their state (ON/OFF or I/O)
6	Alternate Source switch over	There must be a switch over to power the pumping system with grid or generator on request of farmer
7	Origin	Imported/ Local



STANDARDS & SPECIFICATION EQUIPMENT AND MATERIAL

S.No	Items	Features	Specification
1	Submersible Pump Set	Origin	Local/imported
		Material	Pump= Stainless Steel 304/316 Motor= Cast Iron/ Stainless Steel 304/316
		Performance Standard/ Manufacturing Standards	ISO-9906, IEC 60034 or equivalent
		Quality/Environment Certifications	ISO 9001 / ISO 14001 or equivalent, TM reg
		Quality Assurance	Third Party inspection/Testing report
		Rated RPM	2900, $\pm 5\%$
		Pump Efficiency	>65%
		Discharge	As per System Design
		Head	As per System Design
		Rated Voltage	380-440 V
		Frequency	50 Hz 60 Hz
		Phase	Three
		Ingress Protection	IP-68
		Marking	Specification plate bearing unique Sr. No... Brand. Model, & other key features
		Cooling Method	Water Cooled
		Warranty	Two years (Free of cost)

STANDARDS & SPECIFICATION EQUIPMENT AND MATERIAL

S.No	Items	Features	Specification
2	Centrifugal Pump	Origin	Local/imported
		Material	Cast Iron, Bronze, Stainless Steel
		Performance Standard/ Manufacturing Standards	ISO-9906 or equivalent
		Quality/Environment Certifications	ISO 9001 / ISO 14001 or equivalent, TM reg
		Quality Assurance	Third Party inspection/Testing report
		Rated RPM	2900, $\pm 5\%$
		Efficiency	>60%
		Marking	Specification plate bearing unique Sr. No.. Brand. Model, & other key features
		Discharge	As per System Design
		Head	As per System Design
		Warranty	Two years (Free of cost)

STANDARDS & SPECIFICATION EQUIPMENT AND MATERIAL

S.No	Items	Features	Specification
3	Electric Motor	Origin	Local/imported
		Performance Standard/ Manufacturing Standards	IEC-60034 or equivalent
		Quality/Environment Certifications	ISO-9001/14004 or equivalent
		Rated RPM	2900, $\pm 5\%$
		Efficiency Class	IE 2 and above
		Insulation Class	F
		Rated Voltage	380-440 V
		Frequency	50 Hz , 60 Hz
		Power Supply	Three Phase
		Ingress Protection	IP-55 or above
		Cooling Method	Fan Cooled
		Marking	Specification plate bearing unique Sr. No.. Brand. Model, & other key features
		Motor Mounting Position	Horizontal Foot Mounted
		Warranty	Two years (Free of cost)

STANDARDS & SPECIFICATION EQUIPMENT AND MATERIAL

4	Monoblock Pump Set	(Same as Sr. No. 02 and 03) Monoblock Pump set is combination of centrifugal pump at Sr. No. 02 and Electric Motor at Sr. No. 03. Relevant specifications shall also apply to Monoblock pump set, metallic base plate preferably C1 with provision of holes for fastening with ground shall be included.
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Appendix-II

Government of Pakistan
Water Management Department
ICT, Islamabad



Format for submission of “Technical Bid”

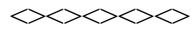
Sr.#	Description	Quantity	Make/Made/Model/Cat No:/Country/Origin

Name/Signature with Stamp of Firm/Company

NOTE: This is only a sample format and not to use it. Submit your bid on your company letter pad on the above format.

Appendix-II

Government of Pakistan
Water Management Department
ICT, Islamabad



Format for submission of “Technical Bid”

Sr.#	Description	Quantity	Make/Made/Model/Cat No:/Country/Origin

Name/Signature with Stamp of Firm/Company