



GOVERNMENT OF KHYBER PAKHTUNKHWA.
PAKHTUNKHWA ENERGY DEVELOPMENT ORGANIZATION
NESPAK House, 24/B-2 Phase-V, Hayatabad, Peshawar. Tele: +92-91-9217295. Email: pd.barandoo@pedo.pk



No. 1566-71/PEDO/Barandoo HPP
Dated: November 12, 2024

To



All Prospective Bidders

Project: Construction of 6.95 MW Mujahidin HPP at Barandoo River, District Torghar, Khyber Pakhtunkhwa (ADP No. 357 (170368)).

Subject: MoM of the Pre-Bid Meeting - Addendum No.1 to the Bidding Documents pursuant to IB 7 of the Instructions to Bidders.

Reference: 1) Pre-Bid Meeting

Dated 19.09.2024

Reference is made to the Pre-Bid Meeting held on September 19, 2024, chaired by the Project Director "6.95 MW Mujahidin Hydropower Project at Barandoo River, District Torghar" in the Committee Room of PEDO House, 38/B-2, Phase-V, Hayatabad, Peshawar, Khyber Pakhtunkhwa.

Please find enclosed Addendum No.1 to the Bidding Documents, issued in accordance with IB 7 of the Instructions to Bidders.

This Addendum constitutes an integral part of the Bidding Documents issued for the "Detailed Design, Manufacture, Supply, Installation, Testing, and Commissioning of 6.95 MW Mujahidin Hydropower Project at Barandoo River, District Torghar on EPC/Turnkey basis".

Encl: Addendum No.1

Project Director
Mujahidin HPP at Barandoo River
District Torghar, PEDO

Copy forwarded for information to:

1. PA to CEO, PEDO, Peshawar.
2. CE (DEV.), PEDO, Peshawar.
3. Regional Head (North), ACE, Lahore.
4. Team Leader/Project Manager, 6.95 MW Mujahidin HPP.
5. Office Copy.

Project Director
Mujahidin HPP at Barandoo River
District Torghar, PEDO



GOVERNMENT OF KHYBER PAKHTUNKHWA
PAKHTUNKHWA ENERGY DEVELOPMENT ORGANIZATION
Room: 313, PEDO House, 38/B-2 Phase-V, Hayatabad, Peshawar. Tele: +92-91-9217295. Email: pd.barandoo@pedo.pk



6.95 MW MUJAHIDIN HYDROPOWER PROJECT AT BARANDOO RIVER, DISTRICT TORGHAR

MINUTES OF PRE-BID MEETING [Dated:19.09.2024]

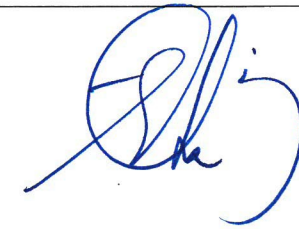
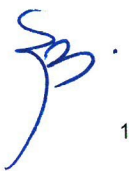
ADDENDUM NO-1: REPLIES TO THE QUERIES OF BIDDERS

The Pre-bid meeting was convened as per the “Invitation for Bids” on Thursday, September 19, 2024, under the chairmanship of the Project Director, Mujahidin Hydropower Project (PD MHPP). The authorized representatives of the bidders attended the meeting, and the list of participants is attached as Annexure-I.

The queries of all the bidders were discussed in detail, which is reflected in the Addendum-1 to the Bidding documents, which incorporates both the queries raised and the clarifications/discussion points from the meeting. The Addendum-1 will be integral part of the Bidding documents in accordance with IB 7 of “Instructions to Bidders”.

The PD MHPP concluded the meeting by requesting if there are any additional queries or concerns from the contractors, shall be formally submitted in writing. Detailed and comprehensive responses will be provided to address all issues raised. Please find below the responses to the queries submitted by the bidders:

| S. No. | Bidding Documents Reference | Query/ Observation | PEDO's Response/ Clarification |
|--------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | <u>VOLUME-I, PARTICULAR CONDITIONS OF CONTRACT</u> <u>Sub-Clause 10.1 Performance Security (on Page 177)</u> | Convert Performance Bank Guarantee into Insurance Guarantee. Considering the huge inflation instability in Pakistan's economy and things are now more uncertain and it is quite impossible to rationalize the prices and quote the price of the bid. Also, in Pakistan Engineering Council Guidelines Section I. Instruction to Bidder 37.1, bidder has the prerogative to submit Performance Security either in the shape of Bank Guarantee or Insurance Guarantee (attached as Annex-A). KPPRA has also issued a notification in which the | Not Agreed The provisions of the Bidding Documents shall prevail. Please refer to KPPRA Notification No. S.R.O(18)/VOL:1-28/2023-24, dated April 08 2024/1021-33 under which the option of Insurance bond has been deleted. |



1

| | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>Contractor is free to submit Performance Guarantee into Insurance Guarantee and it will be acceptable. (Notification attached as Annex-B).</p> <p>We, therefore, request you to facilitate the Bidders by converting the Bank Guarantee into an Insurance Guarantee for Performance security and also reduce from 10% to 5%.</p> | |
| 2. | <u>GENERAL</u> | <p>In recent tenders, we have seen PEDO many times cancel tender after opening of bid stating quoted price by bidders is higher than the estimated cost. Please confirm that it is not mandatory to have limit with Engineer's Estimate.</p> | <p>Clarification</p> <p>The Bidding Document is not based on the percentage above/below/at par procedure. The Employer reserves the right to accept any Bid and to reject any or all Bids pursuant to IB. 32.</p> |
| 3. | <u>VOLUME-I</u> <u>INVITATION FOR BIDS</u> <u>NOCs FROM THE EMBASSY IN</u> <u>PAKISTAN</u> | <p>We have observed that the Chinese Firms submit the Bids, without getting NOC from the Embassy of China in Pakistan. As the Embassy of China in Pakistan has imposed restrictions of working in certain areas of Pakistan, and it is mandatory to get Embassy's NOC for working in any area. Due to not having NOC, cannot submit Bank Guarantees and cannot mobilize their staff, ultimately Employer suffers and huge time is wasted. Therefore, it should be added in the bidding documents that the companies from China shall also attach NOC of the Embassy along with the Bid.</p> | <p>Not Agreed</p> <p>The provisions of the Bidding Documents shall prevail.</p> |
| 4. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.1 Para (5) – Sub-clause (iv)</u> <u>Physical and/or Computational</u> <u>Model Study</u> | <p>Please confirm only CFD analysis is required. Model testing will very expensive and not required for this kind of small project.</p> | <p>Agreed</p> |

| | | | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.1.5.2</u> <u>Training of Employers O&M Staff - Basic O&M Training Program</u> | Training duration of 2 months for 10 people is very long. Please confirm the location of training. Whether at site or in the country from where equipment's are imported? | Clarification The classroom training will be supplemented by visits to the operational project facilities within Pakistan. |
| 6. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.1.5.2</u> <u>GENERATOR EFFICIENCY \geq 97%</u> | For these small unit's maximum generator efficiency shall be 96%. | Not Agreed The provisions of Employer's Requirements shall prevail for "Efficiency \geq 97%". |
| 7. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.6 – Sub-clause 4 a)</u> <u>Stator, rotor, slip-rings and slip-ring compartments, suspended type thrust bearing, guide bearings with supporting bearing brackets, air/oil cooling equipment etc.</u> | Suspended bearings are applicable for Vertical units. | Agreed Being a horizontal shaft Unit , a combined thrust and guide bearing shall be incorporated between Turbine and Generator. |
| 8. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.6 – Sub-clause 4 h)</u> <u>Internal Lighting in Generator and Collector Housing</u> | Applicable for Vertical units | Agreed |
| 9. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.8 – Sub-clause 1) para (1)</u> <u>Generator Housing</u> | For Horizontal generators generally IP20 is used. | Not Agreed The provisions of Employer's Requirements shall prevail for IP 44. |
| 10. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.8 – Sub-clause 3) d) para (1)</u> | We propose to use oil operated brakes. Pressurized oil taken from governing system. | Not Agreed Pneumatic operation of brake is a standard practice. |



| | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <u>The generator may be provided with suitable air operated brakes</u> | | The Employer's Requirements of Air operated Brakes shall prevail/maintained. |
| 11. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.8 – Sub-clause 3) c) para (1)</u> <u>The generators are to be provided with the following monitoring devices</u> | Vibration detector, Partial discharge monitoring, air gap monitoring and latest vibro system are not required for this kind of small unit. | Not Agreed The provisions of Employer's Requirements shall prevail. |
| 12. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>Clause 1.2.4.16 – Sub-clause 1</u> <u>Generator Spare Parts</u> | 1 (One set) Spare Stator Windings is very large qty. over the period of time, it may get spoiled in stores. (Two sets) Poles, one of each polarity. Please confirm 2 sets mean two nos. of poles, one no. of south and one of north polarity. | Clarification: “1/3 rd quantity of the stator coils of a single Unit and four numbers of rotor poles, two each of south and north polarity is essentially required.” |
| 13. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.4.19 Generator Circuit Breaker</u> <u>11 kV (GCB) and 11 kV Circuit Breakers</u> <u>Rated dielectric strength, Lightning impulse withstand voltage, peak = 95kv</u> | As per IEC for 11 kV voltage rating Lightning impulse withstand voltage peak=75kV. | Not Agreed Lightning impulse withstand voltage peak = 95 kV is required as per NTDC Spec. P-44. |
| 14. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>2.2.2.3 Turbine Leading Parameters</u> <u>Turbine Efficiency ≥ 92.8%</u> | For small units generally, Turbine efficiency is around 91.5%. | Not Agreed Rated efficiency of 92 % at rated discharge and rated head is acceptable. However, average weighted guaranteed efficiency of ≥ 92.8% shall prevail / maintained. |



| | | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.8. Main Inlet Valves, 2.2.8.2</u> <u>Type of Valves</u> <u>Butterfly Valves dia. of 1200mm</u> | <p>Diameter of valves shall be left to designer's requirement. It shall be selected as per spiral case inlet diameter requirement.</p> | <p>Clarification</p> <p>All sizing and configuration of turbine and associated equipment have been calculated by using TURBNPRO and verified by empirical data sheets. These sizes are indicative design parameters and are necessarily required to enable the bidder for costing purposes. It is a normal practice and very much understood that these are indicative values which will be finalized during detailed designing by the EPC Contractor. Final dimensions of the MIVs shall be kept according to the rated head and discharge through turbines. However design of the MIV Butterfly type shall be such that opening operation of the valve disc should be in the direction of the flow.</p> |
| 16. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.12.5 Cooling Water System</u> <u>Closed circuit cooling water systems shall be adopted. One complete system shall be provided for each generating unit.</u> | <p>For these small units closed loop cooling water system will be expensive. It will increase the cost of project overall. Please accept open loop system.</p> | <p>Not Agreed</p> <p>The repair and Maintenance cost of open loop cooling system is much higher than closed loop system. When these costs of maintenance and overhauling are deployed over 5 years, the cost of both systems are equalised. Also, since quality of water is unknown / uncontrolled, therefore open loop system is not recommendable.</p> <p>The impact of initial cost is minor as compared to long term benefits of trouble-free operation.</p> <p>Therefore, the Employer's Requirement shall prevail.</p> |



| | | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17. | <u>VOLUME-I</u> <u>INVITATION FOR BID (page 2)</u> <u>Extension in Bid submission/Opening date.</u> | The date of submission of bids must be extended by 04 (four) working weeks to ensure the preparation of a competitive bid proposal. | Clarification. The Deadline for Submission of Bids is extended till November 28, 2024. |
| 18. | <u>VOLUME-II</u> <u>Clause 2.4.2 Land Acquisition for Permanent and Temporary Works</u> <u>Land Acquisition.</u> | Land acquisition status regarding project components, access roads, and the transmission line may please be informed as it may be a governing factor in meeting the timelines. | Clarification The Employer will ensure the availability of Land corresponding to the Project components as per the Contractor's Proposed Programme of Work. |
| 19. | <u>Pre-Bid Site Visit.</u> | The Client is requested to facilitate/guide in conducting a pre-bid site visit to familiarize the bidder with the site conditions and project layout or another Pre-Bid meeting may be scheduled at Project Site as it would be also helpful in eliminating major concerns regarding timely Project completion. | Clarification In Pre-Bid meeting, the Employer assured full facilitation to the Bidders for Site visits. |
| 20. | <u>VOLUME-I, Particular Conditions of Contract, Sub-Clause 11.1 Site Data, para (3) (on page 190)</u> <u>VOLUME-II, Scope of Work, clause 1.1 para(5) (vi) (page II-3), Clause 1.1.1.1 (a) (page II-3) & Clause 1.2.2.6 para (4, 5 & 6) (page II-12 & II-13)</u> <u>Geological Risks.</u> | Risk of variation in geology specifically in the tunnel should be borne by the client. | Not Agreed The risk of variation in geology should be borne by the contractor. The provisions of Employer's Requirement shall prevail. |
| 21. | <u>Volume-II</u> <u>Clause 1.2.2.1(2-h)</u> <u>Site Security</u> | Security concerns related to the District may be updated as prospective E&M Company will be from China / Turkey and further modus operandi regarding security transfer of foreigners to the site (their stay) and back to Islamabad. | Clarification There are no security threats at Site. In case, a foreign company is part of the JV, foolproof security regarding secure |



| | | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | <p>transfer of foreigners to the site (stay) and back to Islamabad would be provided by the Employer/Government.</p> <p>However, the fool proof internal security at Site shall be ensured by the Bidders as per Clause 1.2.2.1(2-h) of the Employer's Requirements as well as the SOPs issued by the Ministry of Interior from time to time.</p> <p>The SOPs issued by the Ministry of Interior from time to time may be kept for record purposes by the bidder and shared with the Management consultants.</p> |
| 22. | <p><u>VOLUME-I, GENERAL CONDITIONS OF CONTRACT, CLAUSE 26.3</u></p> <p><u>Earlier Completion</u></p> | <p>Early project completion should be rewarded @ 0.0125% of bid value per week, Max value to be set by PEDO.</p> | <p>Not Agreed</p> <p>The provisions of the Bidding Documents shall prevail.</p> |
| 23. | <p><u>VOLUME-I, PARTICULAR CONDITIONS OF CONTRACT</u></p> <p><u>SUB-CLAUSE 33.1 TERMS OF PAYMENT</u></p> <p><u>Schedule No.1 - Plant and Equipment Supplied from Abroad</u></p> | <p>Sixty-Five percent (65%) of the total CIP amount should be paid within 14 days upon the delivery from manufacturer premises on presentation of shipping documents etc., adjusting this payment term will help reduce project costs and facilitate smoother transactions during the import of machinery.</p> | <p>Not Agreed</p> <p>Sub-Clause 33.1 Terms of Payment, Schedule No.1 - Plant and Equipment Supplied from Abroad is maintained.</p> |
| 24. | <p><u>VOLUME-I, PREAMBLE TO CONDITIONS OF CONTRACT, SECTION-5, Sub-clause 1.1.40 Warranty period</u></p> | <p>Please clarify the ten (10) years of warranty period, shall the contractor free repair and maintenance for (Plant/ goods/ equipment) in the 10 years? and shall bidder consider the cost?</p> | <p>Clarification</p> <p>This warranty is related to the Manufacturer of the Plants/ Goods/ Equipment, who may be a Partner or Sub-contractor of the Bidder. The Manufacturer shall fulfil such</p> |



| | | | |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | obligations, as a common worldwide practice and shall consider compliance while Bidding. |
| 25. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.2.11 Flood Protection wall (page II-15)</u> <u>The proposed flood protection wall at Powerhouse. i. Type - Counterfort, RCC Wall (G-28), ii. Height - Varies 16.5m to 8m, iii. Length - 90m, iv. Top EL of Wall - 496m</u> | Shall bidder comply the requirement? Bidder checked the drawing MHPP-GEN-004, showing the existing powerhouse landform is at EL 485-495m. For saving cost, bidder proposes to increase the powerhouse level to EL 494.21m (100-year flood level). Please review and confirm. | Not Agreed The proposed Elevation will reduce the Net Head significantly, thereby changing Plant Size, Plant Designs, loss of Energy and all Economics of the Project. The provisions of Employer's Requirement shall prevail. |
| 26. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.4 Electrical Equipment Design Requirements,</u> <u>1.2.4.2 para (2) Engineering Standards and Specifications</u> | Can bidder adopt west European brand but made in other countries? Or, For saving cost, can bidder adopt alternative of Chinese brand? Please review and confirm. | Clarification E&M Equipment shall be of European Origin and European Standards, manufactured in Europe or otherwise, meeting the Employer's Requirements. |
| 27. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.4.6 Generators 11kV, 3 Phase, Page II-46</u> <u>e) Mechanical Braking and Jacking system or as proposed by the manufacturer.</u> | Jacking system is not application for horizontal generator. Shall delete it. Please confirm. | Agreed Jacking system is not applicable to Horizontal Shaft Units. However Pneumatic Braking system to be applied against the Generator Flywheel should be included in the design. |
| 28. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.4.6 Generators 11kV, 3 Phase, Page II-46</u> <u>c) Monitoring Systems (page II-49)</u> | These monitoring systems are not suitable for such small generator, bidder propose to cancel them. Please review and confirm. | Not Agreed The provisions of Employer's Requirements shall prevail for the Monitoring system. |
| 29. | <u>VOLUME II, SCOPE OF WORKS</u> <u>1.2.4.16 Spare Parts</u> <u>1) Generator Spare Parts</u> | Please clarify one set spare stator windings, means one piece, 6 pieces, or all windings of completion stator? Our generator structure does not need these oil pumps. | Clarification Already clarified at Sr, No: 12 |

| | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>i. 1 (One set) Spare Stator Windings, with required mounting material</p> <p>xiii. 1 (One set) High pressure oil pump and motor of each type (AC and DC)</p> <p>2) Other Spares</p> <p>b) combine bearing</p> <p>ii. 1 (One set) electric circulation pump/oil cooler unit.</p> <p>iii. 1 (One set) AC pump for the oil injection.</p> <p>d) Maintenance Equipment</p> <p>iv. 1 (One set) Protection Relay tester</p> | <p>Protection Relay tester is high cost for small power plant. Please review and confirm.</p> | <p>1(i) Clarified as: “1/3rd quantity of the stator coils of a single Unit and four numbers of rotor poles, two each of south and north polarity is essentially required.</p> <p>2b) ii. Not Agreed. One electric circulation pump / oil cooler Unit should be provided for combined thrust and guide bearing of each horizontal shaft Unit.</p> <p>iii. Oil injection system is not applicable to horizontal shaft Unit</p> <p>d) iv. Protection Relay tester is required.</p> |
| 30. | <p><u>VOLUME-II, SCOPE OF WORKS</u></p> <p><u>1.2.4.22 DC and UPS Systems</u></p> <p><u>No requirement for cell voltage.</u></p> <p><u>3. Spare Parts</u></p> <p>i. 1 (One Set) each type of cells with covers.</p> | <p>For cell voltage, 2V or 12V? For cell spare, bidder think one set means one piece. Please review and confirm.</p> | <p>Clarification</p> <p>Cell Voltage 12 V (or as proposed by the manufacturer)</p> <p>Spare set of cell. (04 Nos.)</p> |
| 31. | <p><u>VOLUME II, SCOPE OF WORKS</u></p> <p><u>1.2.4.28 Earthing and Lighting Protection Systems</u></p> <p><u>No requirement for material of earthing conductor.</u></p> | <p>Bidder propose to adopt Galvanized flat steel for earthing conductor. Please review and confirm.</p> | <p>Clarification</p> <p>Earthing and Lightning Protection System for the Project shall comprised of copper conductors and copper rods.</p> |
| 32. | <p><u>VOLUME-II, SCOPE OF WORKS</u></p> <p><u>1.2.4.29 MV and LV Cables Systems</u></p> <p><u>No requirement for material of MV (11kV) and power Cable.</u></p> | <p>Please clarify the material of MV cable and power cable, copper or aluminium?</p> | <p>Clarification</p> <p>(1) LV wires and cables shall be copper. (2) 15 KV MV cables as per NTDC Specs. P-29, Compacted Aluminium.</p> |

| | | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 33. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.4.6 Spiral Casing</u> <u>Four equally spaced stainless-steel taps 25 mm in diameter shall be provided at the turbine inlet for head measurement and two or more taps provided for Winter Kennedy flow measurement.</u> | <p>Shall bidder consider the Winter Kennedy Flow Measurement on spiral casing? And bidder will set Ultrasonic flow measurement on penstock. Please confirm.</p> | <p>Agreed and further clarified as</p> <p>Bidder can propose his own arrangement of flow measurement at turbine inlet. The Employer will consider if the proposal complies with the relevant Standards.</p> <p>Winter Kennedy Flow Measurement is required for measurement of relative efficiency of the prototype. However acoustic flow meter should be provided at each penstock for display of discharge in SCADA system.</p> |
| 34. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.4.21 Turbine Spare Parts</u> <u>viii. 1 (one set) Bearing oil cooling pump.</u> <u>xii. 1 (one set) Vapour type thermometer with sensing bulb</u> <u>xiii. 1 (one set) Solenoid valves.</u> | <p>Our turbine structure has some different:</p> <ul style="list-style-type: none"> vii. No need bearing oil cooling pump. vii. Adopt RTD (PT 100) xiii No need solenoid valve for turbine | <p>Clarification</p> <p>xiii. 1 (One Set) Solenoid valves is deleted.</p> <p>For others, the provisions of Employer's Requirements shall prevail.</p> <p>Depending upon the design, Centralized Oil Cooling system for combined thrust and guide bearings and Generator bearings shall require Oil circulating pump. Separate RTDs shall be provided for thrust pads metal temperature measurement and Guide bearing pads temperature ,display on local panel and main control room.</p> |
| 35. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.5 Turbine Model Tests</u> <u>Relating requirements</u> | <p>Bidder propose to cancel the turbine model test. Because of the project unit is small, this cost is not necessary. Please confirm.</p> | <p>Agreed</p> <p>The bidder should provide Hill Chart of their reference model of turbine similar in size and operating conditions of head and discharge. The contractor shall carry out Modelling in CFD to ascertain performance</p> |



| | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | characteristics of the prototype turbine Runner. |
| 36. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.7.2 Functional Requirements</u> ii. Output Control iii. Flow Control iv. Turbine Creep Detection | The small governor system excludes the following functions, ii Output Control (from main control board) iii Flow Control iv. Turbine Creep Detection | Not Agreed The provisions of Employer's Requirements shall prevail. |
| 37. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.7.3 Hydraulic Pressure Unit for Governor</u> <u>The governor oil pressure systems are foreseen to operate at about 10 bars and Nitrogen is required to maintain the oil pressure at certain value and keep the pressure available for servomotors as well as Main Inlet valve hydraulic cylinders.</u> | Bidder propose the rated pressure is 160 bars. The HPU is only for governor, HPU for main inlet valve will be considered separately. Please confirm. | Not Agreed The provisions of Employer's Requirements shall prevail, however, the manufacturer can provide his own design calculations and technical detail for review and approval by the Engineer at the EPC design stage. A 16 Bar HPU shall be provided for Governing system of each Turbine. For operation of MIVs a separate oil pressure system shall be provided. |
| 38. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.7.4 Oil Pumping System</u> <u>Each HPU shall have two (2) Screw type self-priming pumps.</u> | Bidder proposes to adopt gear self-priming pumps. Gear pump is suitable for small HPU. | Not Agreed The provisions of Employer's Requirements shall prevail. |
| 39. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.8.3 Hydraulic Power Unit for MIV</u> - "synchronized with the unit governor is recommended" - "operate at about 60 bars" - "The MIVs will be provided with two double acting hydraulic cylinders for opening and closing" | - Hydraulic Power Unit for MIV is set separately, not for governor. - The operating pressure will be at 160 bars - the MIV is small, which only equip one acting hydraulic cylinder | Not Agreed The provisions of Employer's Requirements shall prevail, however, the manufacturer can provide his own design calculations and technical detail for review and approval by the Engineer at the EPC design stage. Explained at Sr. No.37 Above. |

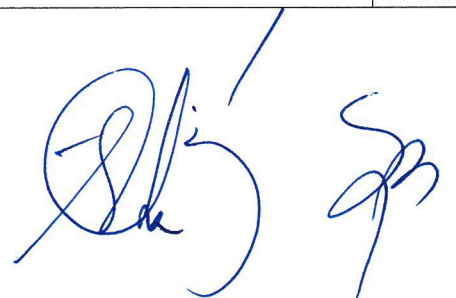
| | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 40. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.8.3 Hydraulic Power Unit for MIV</u> <u>Key Parameters of Main Inlet Valve</u> <u>(page II-118)</u> <div style="border: 1px solid black; display: inline-block; padding: 2px;"> Sealing System Stainless Steel </div> <u>2.2.8.4 Inlet Valve Spare Parts (page II-119)</u> | Bidder suggests to adopt Rubber Seals, which is the same with clause 2.2.8.2 spare parts requirements. | Clarification The spare parts mentioned in clause 2.2.8.4 The disc seals should be of Neoprene rubber coated with sulphide as lubricant while the body seat should be made of stainless steel. |
| 41. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.8.4 Inlet Valve Spare Parts</u> iv. 1 (one set) Needle tip and seat ring for the bypass needle valve. | Bidder propose electrical motor-driven bypass valve. Please confirm. | Agreed Motorized bypass valve is acceptable. |
| 42. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.10 Main Lifting Equipment</u> Two (02), 5-ton capacity JIB shall be provided to operate the Draft Tube gates and stoplogs. | Bidder proposes screw hoist instead of JIB crane. Please confirm. | Not Agreed The provisions of Employer's Requirements shall prevail. |
| 43. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.12 Mechanical Auxiliaries</u> <u>2.2.12.1 Scope</u> i. Compressed Air system/ High Pressure xi. Powerhouse Elevator | No need high pressure compressed air system. No need elevator for the horizontal group powerhouse. Please confirm. | Clarification The provisions of Employer's Requirements shall prevail for compressed air system, however, Elevator stand omitted for all the Bidders. 120 Psi compressed air systems is recommended for station air services and pneumatic brakes for generators. |
| 44. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.12.5 Cooling Water System</u> <u>Closed circuit cooling water systems</u> <u>comprise a primary cooling water circuit and a secondary cooling water circuit.</u> | Bidder propose to adopt one circuit cooling water system, which connect with penstock and discharge to the tailrace. Please confirm. | Not Agreed The provisions of Employer's Requirements shall prevail. Closed loop cooling water system should be provided in the design. |



| | | | |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 45. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.12.15 Hydraulic Steel Structures</u> <u>4) Hydraulic Servomotor Hoists</u> <u>5) Gantry Cranes (for Stop log and Gates)</u> <u>2.2.13 Hydraulic Hoists and Gantry Cranes.</u> | For the small power station, bidder suggests to adopt screw hoist for listing stop logs and gates. Please confirm. | Clarification The provisions of Employer's Requirements shall prevail. A Monorail system with motorized hoisting device for lifting of stop logs should be provided. |
| 46. | <u>VOLUME-II, SPECIFICATION</u> <u>2.9.4 Vehicles</u> <u>The Six (6) vehicles stated shall become the property of the Employer on completion of the works.</u> <u>i. Double Cabins (4x4) - 3 Nos, ii. Suzuki (Jimny) - 3 Nos</u> | Please confirm the quantity of vehicles, better with vehicle brand. | Clarification The Standard Specifications shall prevail. Vehicle Spec. may be added to avoid future confusion. i. Provision of latest diesel driven 5-seater, 4-wheel drive pickup type Toyota Hilux Revo G Automatic Double Cabin or Equivalent - 3 Nos. ii. Latest Suzuki Jimny (4x4) / Equivalent - 3 Nos. |
| 47. | <u>VOLUME-II, SCOPE OF WORKS</u> <u>1.2.4.8 Structural arrangement of generators – Para (1&2)</u> | These specifications are for vertical generators. Horizontal generators of this capacity do not air-water coolers. These are natural air cooled. Firefighting system for this capacity generators is generally water sprinkling. Does not required FM2000 CO2 system. Else it will impact the cost significantly. | Not Agreed The provisions of Employer's Requirements shall prevail for the Air/water cooling of Generators and FM 200 for the firefighting system. |
| 48. | <u>VOLUME-III, Drawing no. MHPP-ELE-001</u> | As per the drawing no. MHPP-ELE-001 provided in Volume-III from generator outgoing directly power is fed into the 11kV line. We suggest 11kV/11kV isolation transformers shall be provided to protect the generators and other equipment. Else any disturbance in outgoing line will impact the powerhouse operation. | Not Agreed The powerhouse operation will not be disturbed by outgoing lines due to impedance at generator neutral point. The impedance value selection will be such that to allow limited Earth Fault Current and to |

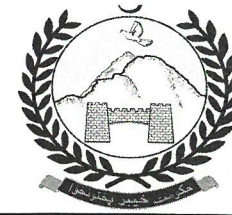
| | | | |
|-----|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | <p>trip the 11 KV Circuit Breaker of outgoing feeder without disturbance to Generators etc.</p> <p>The provisions of Employer's Requirements shall prevail.</p> |
| 49. | <u>GENERAL</u> | <p>Please confirm units will operate in Grid or Off-Grid. What is the load connected to 11kV line and how much generation capacity is available on the 11kV line? Also please confirm percentage of times on-grid and off-grid operation in anticipated.</p> | <p>Clarification</p> <p>Primarily the Transmission Lines from MHPP is an Isolated system/Off-grid. However, PEDO after completion of the Project and initial operation of the Isolated Transmission System, may decide in future as considered appropriate.</p> <p>However, protection system should be design for both Isolated mode (Islanding) as well as connection with national grid system.</p> |
| 50. | <u>VOLUME-II, SPECIFICATION</u> <u>2.2.9 Powerhouse crane is proposed of 35/5T</u> | <p>Please allow contractor to decide the capacity of EOT Crane based on the weight of heaviest equipment to be lifted considering 1.1 times of maximum weight to be lifted.</p> | <p>Partially Agreed</p> <p>The Bidder can propose the capacity of Powerhouse Crane based on heaviest load to be lifted with safety factor of 1.2 times.</p> |
| 51. | <u>Volume I, Table B1: Personnel</u> | <p>There are lot of Personnel are listed in Table B1 including Welders, Technicians and their CVs are required which are not necessary at the time of Bidding so we request to rationalize the requirements according to the Appendix B Form B8(a).</p> | <p>Clarification</p> <p>At Bidding stage, the Bidder may submit the CVs of key personnel listed in "Form B8 (a): Personnel" only.</p> <p>The CVs of personnel mentioned in "Table B1" like Welders, Technicians etc., can be provided and approved during the Execution Stage, and are not required at the Bid Stage.</p> |
| 52. | <u>Formwork:</u> | <p>The Employer emphasized that the Bidder shall use at Site an advanced Formwork system for the Weir Structure and Powerhouse Building to achieve the excellent finish.</p> | <p>Clarification</p> |

| | | | |
|--|-----------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Volume II, Employer's Requirements, Sub-Clause 2.1.8.1 (iii) | | The Bidder shall consider in his Bid, the PERI Formwork System or alternate equivalent (conditioned with, Satisfaction and Approval of the Engineer) for the Weir Structure and Powerhouse Building. |
|--|-----------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|





PEDO
Pakhtunkhwa Energy Development Organization
Government of Khyber Pakhtunkhwa



Pre-Bid Meeting

Attendance Sheet of the Bidders for

Construction of 6.95MW Mujahidin Hydropower Project at Barandoo River, District Torghar, KKP.

Date: Sep 19, 2024

Time: 11:00 am

| Sr. No. | Name of the Contractor | Representative Name | Designation | Email | Contact No. | Signature |
|---------|-----------------------------------|---------------------|--------------------|------------------------------------------------------|--------------|-----------|
| 01 | DESIGNMEN Consulting Engrs. | Imran I Chann | Contract Engr. | engsirmen.dana1@gmail.com | 0345-634334 | |
| 02 | DESIGNMEN | Najam-us-Sazib | Pr. Engr. Hydr | najam23091@yahoo.com designmenistanabad@gmail.com | 03335423802 | |
| 03 | Designmen | Sohail Ishaq | Project Engr | sohailwayne@hotmail.com | 03008545564 | |
| 04 | MK Engineers & Consultant Pvt Ltd | WAHIB QAYYUM | BDO | wahib@mkengineers.com PK | 0312-8061227 | |
| 05 | Tabish (GRC) | Tabish Ayub | offic manager | Tabish Ayub | 0335-9290160 | |
| 06 | Muhammad Shoaib (GRC) | | General Manager | mshoaibilahi@yahoo.co.uk | 63017900079 | |
| 07 | Rana Sagheer Ahmad | Railcop. | Bidding Specialist | | | |
| 08 | RAILCOP Aslan Khalique | Aslan Khalique | Assistant Manager | asalan.khalique@railcop.com.pk | 0311-1334288 | |
| 09 | Shaheen & Sons | Ashiq Hussain | Manager | shaheenandsons@gmail.com | 0341-9487930 | |
| 10 | | | | | | |