



Government of Nepal
Ministry of Energy, Water Resources and Irrigation
Department of Water Resources and Irrigation
Bheri Babai Diversion Multipurpose Project
Birendranagar, Surkhet

Addendum
on
Bid Documents
of
DESIGN, MANUFACTURE, SUPPLY, TRANSPORTATION, ERECTION,
TESTING AND COMMISSIONING
OF
ELECTRO MECHANICAL WORKS

Addendum-I

Contract ID: **ICB-EM-01/TGS/BBDMP/2078-079**

Issued on: **25 February, 2022 00:00 hours**

Employer: Department of Water Resources and Irrigation, Bheri Babai Diversion Multipurpose Project, Birendranagar, Surkhet, Nepal

Name of Work: Design, Manufacture, Supply, Transportation, Erection, Testing and Commissioning of Electro Mechanical Works

Invitation for Bid No.: ICB-EM-01/TGS/BBDMP/2078-079

SN	Section / Clause	Existing Provision	Amendments
Section 4: Bidding Forms			
1	Manufacturer's Authorization	“We hereby extend our full guarantee and warranty in accordance with Clause 27 of the General Conditions of Contract, with respect to the Goods offered by the above firm.”	<i>Replace the existing paragraph with the following paragraph</i> “We hereby extend our full guarantee and warranty in accordance with the Employer's Requirements and the Conditions of Contract, with respect to the Goods offered by the above firm.”
Section 5: Employer Requirements			
2	Part I—GTS— 1.2 Project Description— 2nd Paragraph—3rd Sentence	“Since there is a head difference of about 147.18 m between the Bheri off-take and Babai River at its terminal point, about 46.80 MW of power output can be generated by utilizing this head difference by constructing a hydropower station.”	<i>Replace the existing sentence with the following sentence</i> “Since there is a head difference of about 151.7 m between the Bheri off-take and Babai River at its terminal point, about 46.80 MW of power output can be generated by utilizing this head difference by constructing a hydropower station.”
3	Part I—GTS— 1.2.6—Table 1-1—5. Headworks		<i>Add new phrase as follows</i> “Length of Dam: 114 m”
4	Part I—GTS— 1.2.6—Table 1-1—11. Tailrace	“Design Tail water level”	<i>Replace the existing phrase with the following phrase</i> “Design Tail water level: 307.35 masl”
5	Part I—GTS— 1.2.6—Table 1-1—12. Turbine	“Turbine Axis Level: 306.72 masl”	<i>Replace the existing phrase with the following phrase</i> “Turbine Axis Level: 305.85 masl”
6	Part I—GTS— 1.2.6—Table 1-1—13. Power and energy output	“Gross head: 151.28 m” “Rated net head: 130.85 m”	<i>Replace the existing phrase with the following phrase.</i> “Gross head: 151.7 m” “Rated net head: 130.8 m”
7	Part II—PTS— Mechanical—3 Main Inlet Valves	“spherical valve”	<i>Replace the term “spherical valve” with “butterfly valve” throughout the “Chapter 3: Main Inlet Valve.”</i>
8	Part II—PTS— Mechanical— 3.5.11 Piping	“3.1.1.1 Brake Nozzle Lines”	<i>Remove the existing sub-chapter “3.1.1.1 Brake Nozzle Lines” in its entirety.</i>

SN	Section / Clause	Existing Provision	Amendments
9	Part III— PTS— Electrical— 1.5.5 Bearings—2 nd Paragraph—1 st Sentence	“According to standard IEC 50034-7, bearings arrangement of the generator should be IM 8221.”	<i>Replace the existing sentence by the following sentence.</i> “According to standard IEC 60034-7, bearing arrangement of the generator should be IM 8421.”
10	Part III— PTS— Electrical— Header of Page 243 to 316 3.5.11 Piping	“Section 5: Employer’s Requirements—General Technical Specifications”	<i>Replace the existing header with the following header.</i> “Section 5: Employer’s Requirements—Part III—Particular Technical Specifications—Electrical”

Queries and Response

1 and 2

SN	Clause No.	Modification/Clarification Requested by Bidders	Reply from Client
1	Section 2: Bid Data Sheet, ITB 22.1	Considering the complexity of the subjected project and also the difficulties caused by the third wave of COVID-19, the time is too tight for us to meet your deadline for submission of high-quality bid. Therefore, we hereby kindly request your good office to extend the bid submission deadline by two months up to May 10 th , 2022.	The Provision remains unchanged.
2	Section 2: Bid Data Sheet, ITB 7.4 and 22.1	<p>As you know currently the entire globe is going through a tough phase i.e. COVID-19 and in this time of uncertainty considerable time is required considering the magnitude of the work, inputs required from various vendors, consolidation of pre-bid clarifications etc.</p> <p>Time is also required to make pre-bid queries for the proposed Pre-bid meeting on 13th February, 2022. In view of the standstill condition, we humbly request you to kindly extend the pre-bid meeting and bid submission by 8 weeks from the current date of 13th February, 2022 and 10th March, 2022 respectively.</p> <p>We would appreciate your kind confirmation of revised date of pre-bid meeting and bid submission date enabling us to submit a presentable bid.</p>	The Provision remains unchanged.
3	Section 3: Evaluation and Qualification Criteria, 2.4.2 (b)-2.	<p>We propose the following amendment in the Turbine key work experience and request for kind acceptance of the same:</p> <p><u>Present Criteria:</u> Experience as Contractor or Subcontractor on Design, manufacture, supply, installation, testing and commissioning of at least two (2) Vertical Shaft Francis Turbine of minimum capacity 20 MW along with its accessories. At least one (1) such turbine shall have been in successful operation outside the country of manufacture for at least 12 months from the date of commissioning.</p> <p><u>Proposed Amended Criteria:</u> Experience as Contractor or Subcontractor on Design, manufacture, supply, installation, testing and commissioning of at least two (2) Vertical Shaft Francis Turbine of minimum capacity 20 MW along with its accessories. At least one (1) such turbine shall have been in successful operation outside the country of manufacture for at least 12 months from the date of commissioning.</p>	The Provision remains unchanged.

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1	Section 2: Bid Data Sheet, ITB 22.1		<p>The whole China just opened few days back after celebrating our long New Year holidays. No need to mention here that the asked technical specification is very enormous and project itself is Design and Built type. We have to first design and then ask quotation and various document from the perspective manufacturers/vendors, which will take good time for sure. Then after we need to work on complete proposal preparation. Also, there is requirement of Deed of Joint Agreement with these manufacturers which is time consuming by legal prospective. Considering above facts, we would like to request you for minimum 6 weeks time extension so that we can prepare and submit best proposal as per the requirement of your esteem organization.</p>	The provision remains unchanged.
2			<p>With reference to above subject we hereby express our interest for participating in the above said tender. Because of the following reason it is difficult to prepare the bid documents within the time specified.</p> <p>1. It will take some more time for the bid security preparation.</p>	The provision remains unchanged.

Queries and Response-2 for Electro Mechanical Works, IFB No.: ICB-EM-01/TGS/BBDMP/2078-079 of BBDMP

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			<p>2. This project not only need to supply turbine and generator, but other equipment such as transformers, MIV, control and protection system etc., and we need to more time to prepare the bid documents with high quality.</p> <p>3. Because of corona, many organizations are working with less employees and some are also working from home, and because of corona prevention measure and ongoing winter Olympic game, it's not easy to travel to other organizations so it is difficult to collect the document from the concern organization on time.</p> <p>4. All the experience file should be contact the project owner. need to be translated to English and notarized, the whole process will be at least 6 weeks;</p> <p>Under the above circumstance, we would like to request for an extension of time for tender submission by at least 6 weeks.</p>	
3			To deal with the purpose of the bid guarantee, we need your formal clarification that Bheri Babai Diversion Multipurpose Project has	Bheri Babai Diversion Multipurpose Project so far does not have any water right or territorial dispute with the neighbouring countries.

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			no water right or territorial dispute with the neighbouring countries.	
4			We request you to provide Environmental Impact Study (EIA) report and letter of approval of EIA study from concerned authorities.	The Environmental Impact Study (EIA) for Bheri-Babai Diversion Multipurpose Project (Component 'B' Hydropower) has been approved by Government of Nepal, Ministry of Environment, Science and Technology in 2069/09/12 (Dec 27, 2012). The EIA report shall be provided during the contract execution phase.
5	Section 5: ER—Part I: Bidding Procedures; Section 4-Bidding Forms, Part IV: GTP-Mechanical, Part V: GTP-Electrical Drawings		Please provide the editable version of all the bidding forms and CAD version of drawings for easy preparation.	The bidding forms and drawings are available in pdf versions only.
6	Section 3: Evaluation and Qualification Criteria—2.6 Equipment	The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria).	Could you please clarify which is the key equipment mentioned in Section III, it cannot be found in Section III.	The bidders shall propose the key equipment required for the project themselves.
7	Section 5: ER—Part II-PTS-Mechanical: 4.3 Limits of Supply	(4) With the HVAC System The supply of the cooling water system shall include the water pipes routed to shut-off valves located in the water treatment plant.	Please clarify the distance between water treatment plant and powerhouse for bidder to evaluate the quality of materials.	The Water Treatment Plant shall be an overhead tank generating a water head of 50 meters and it shall lie within the 50 meters proximity from the Powerhouse.

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			In addition, please confirm the water treatment plant is out of the scope of EM contract.	The EM contractor shall propose a suitable location for Water Treatment Plant. Except for the Civil Construction Works, the EM contractor shall supply and install the pump, pipes and all accessories needed to pump required water from the tail race to the Water Treatment Plant.
8	Section 5: ER-Part III-PTS-Electrical	1.5.8.1.1 Electrical (Dynamic) Braking System All equipment, transformers rectifiers, power supply arrangements, switches and protective devices for the braking circuit arrangement shall be included in the offer.	Please confirm the Electrical (Dynamic) Braking System shall be included or not. Because we found the details of requirements in 1.5.8.1.1, but there's no indication of relative equipment in the relative electrical drawings.	The Electric Braking System is included in the scope of this Bid.
9	Section 5: ER-Part III-PTS-Electrical: 9 MV and LV Cables	Cable trays	There's no description and quote item of cable trays in the tender documents. As we know, it should be supplied with cables together. Please confirm.	All the Cable trays (GI) and cable trays support materials shall be supplied and installed by the contractor.
10	Section 5: ER-Part III-PTS-Mechanical	3 Main Inlet Valves 3.5.11 Piping 3.1.1.1 Brake Nozzle Lines A manually operated needle valve directly attached to the relevant flange on the spherical valve body downstream of the maintenance seal	The brake Nozzle line is only used on Pelton turbines. Please clarify. Please clarify the type of inlet valve, spherical valve or butterfly valve?	Please refer to Clause 7 and 8 of Addendum-I.

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		shall serve as the guard valve of the brake nozzle line.		
11	Section 5: ER-Part III-PTS-Electrical	<p>1.5 Construction Features</p> <p>1.5.1 General</p> <p>The lower bracket shall be installed on the concrete base with a circular opening and shall have sufficient strength and rigidity to support the weight of entire rotating element of the generator and turbine plus hydraulic thrust of turbine.</p>	<p>The describe of the type of generator is different from the drawings. Beside this, the result of our practical engineering experience make us more inclined to choose the umbrella hydro generator.</p> <p>Bidder suggest to use the overhung type hydro-generator.</p>	The type of the generator is suspension type.
12	Section 5: ER-Part I-GTS-Page 6; Part VI-ES and TS-Page 1	<p>1.2.6 Salient Features</p> <p>Table 1-1: Salient Features of Bheri Babai Diversion Multipurpose Project:</p> <p>11. Design Tail Water Level 307.72 masl</p> <p>Table 1-2: The estimated capacity of the project: Tail Water Level 307.35 masl</p>	Please confirm the value of Tail Water Level.	Please refer to Clause 4 of Addendum-I.
13	Section 5: ER-Part I-GTS-Page 6; Drawing Title: BBDMP-IV-EM-10 (C S A-A) and 11 (C S B-B)	<p>1.2.6 Salient Features</p> <p>Table 1-1: Salient Features of Bheri Babai Diversion Multipurpose Project:</p> <p>12. Turbine Axis Level 306.72 masl</p> <p>Turbine Axis Level is 305.85 from the drawing</p> <p>Turbine Axis Level is 305.85 and 305.15 from the drawing</p>	Please confirm the value of Turbine Axis Level.	Please refer to Clause 5 of Addendum-I.
14	Section 5: ER-Part I-GTS-Page 6; Part II-	1.2.6 Salient Features	Please confirm the value of Gross Head.	Please refer to Clause 6 of Addendum-I.

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	PTS-Mechanical-Page 13	Table 1-1: Salient Features of Bheri Babai Diversion Multipurpose Project: 13. Gross head 151.28 m Table 1-1 Basic parameters of turbine		
15			Please provide head range, including maximum head and minimum head, if possible.	When two units are operating the net head lies approximately between 130.8 and 119.3 metres. When only one unit is running the net head lies approximately between 145.7 and 142.3 metres. The power plant is designed to run two units throughout the year. However, during some unexpected cases only one unit might run.
16			Please provide the position of surge shaft or detailed water conveyance system drawings.	The surge shaft is located approximately 900 meters upstream of Powerhouse. The bottom elevation of surge shaft is approximately 415 masl.
17	Section 5: ER-Part III-PTS-Electrical: 2. Power Transformer; and 7. 132 kV Switchgear and Switchyard Equipment	Scope Work of Power Transformer and 132 kV Switchyard	Please clarify the scope of work, if it included the lines and gantries from the Power Transformers to the Switchyard, please provide the elevation of 132 kV Switchyard. In addition, please provide the detailed drawings of 132 kV switchyard.	The scope of work shall be upto Gantry from where transmission line will start. The elevation of switchyard is around The detailed drawings shall be provided by the Contractor.
18	Section 5: ER-Part III-PTS-Electrical: 3.	Scope Work and the way of connection from the isolation	Please clarify the scope of work, if it includes the connections from the	The connection from the Powerhouse Isolation

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	Station Service & Isolation Transformers; and 9. MV and LV Cables	transformer to the colony and headworks.	Isolation Transformer to the Colony and Headworks. If it is included, which one shall be adopted by power cables as per the main single line diagram or by overhead lines and offer the connections route, distance from Isolation Transformer to the Distribution Transformer in colony and Headworks.	Transformer to the Powerhouse side colony lies in the scope of this contract. The Connection from Powerhouse Isolation Transformer upto dead end pole of Powerhouse shall be made via power cable and from dead end pole upto colony via. overhead conductor. The connection from the Powerhouse Isolation Transformer to Headworks does not lie in the scope of this contract.
19	Section 5: ER-Part III-PTS-Electrical	12 Illumination System 12.2 Scope of Works, page 275 12.6 Dam Electrical Works	The work scope include illumination of headworks area including desanding basin, intakes, balancing reservoir and Dam Control Building and Gate structures, please provide the details of the places such as the long of dam and corridors inside dam, entrance area, tailrace area, access road to tailrace, etc.	The length of barrage is about 114 meters with a motorable bridge. Approximate length for illumination in left bank of Headworks is 300 m and in right bank of Headworks is 150 m. The street lamps in Headworks area shall cover an approximate length of 500 m. The Street lamp in Powerhouse area shall cover an approximate length of 500 m.

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20	Section 5: ER-Part III-PTS-Electrical: 11. Grounding System	Grounding	1) The Scope of work include weir auxiliary building. Does it mean only house buildings or all the headwork areas, please provide the details of relative places. 2) If scope of work include the Dam, please provide the detail structure of dam.	In Headworks area, the scope of grounding works includes the headworks control building only. Grounding works of Dam is not included in the scope of this contract.
21	Section 5: ER-Part VI-Energy Sheet and Time Schedule		The project duration in "Time for completion" is 1095 days, which is in contradiction with the duration (1546 days) indicated in the bar chart of construction schedule in "2. Time Schedule". Please clarify how much the project duration is.	The time for completion for Electro Mechanical Works is 1095 days.
22	Section 5: ER-Part II-PTS- Mechanical	1. Hydraulic Turbines The diameter of the penstock before the spiral casing in the bidding documents and the picture is $\phi 1800$ mm	After calculation, the diameter of the first section of the inlet of the spiral casing of the turbine is $\phi 2000$ mm, the diameter of the inlet of the spiral casing needs to be $\phi 2200$ mm, and the diameter of the penstock in front of the spiral casing is too small. Please confirm whether the diameter of the penstock in front of the spiral casing can be increased to $\phi 2200$ mm?	Detailed calculations shall be done during Detailed Design Phase.
23	Section 5: ER-Part-II-PTS-Mechanical	3. Main Inlet Valves 3.2 Scope of Works: Three (3) set of butterfly valve complete with bypass valve, seals, operating mechanism and instrumentation	The scope of work states the type of valve is butterfly, but the texts mentioned "spherical valves" many times. Please confirm the type of Inlet Valve.	Please refer to Clause 7 of Addendum-I.

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24	Section 5: ER-Part-II-PTS-Mechanical	3. Main Inlet Valves 3.5.1 Valve Body The body shall be divided, but the splitting shall not cross the trunnion bearings.	Can the valve body be made as a whole?	Well proven design can be considered during Detailed Design Phase.
25	Section 5: ER-Part I-GTS	1.24 Contractor's Site Accommodation, Temporary Offices and Facilities	Is it the responsibility of the contractor to obtain the land use right of the camp?	The contractor shall obtain the land use right of the camp.
26	Section 5: ER-Part I-GTS	1.58.1 Training at Site All expenses for the plant staff will be borne by the Contractor.	How many employees are there in the plant, and do the expenses include allowances and food and accommodation?	For Training at Site, the contractor shall bear the cost of providing training only. The expense does not include the allowances and cost of food and accommodation for plant staffs.
27	Section 5: ER—Part II—PTS—Mechanical	1. Hydraulic Turbines 1.2.8 Cavitation Pitting If during the guarantee period of 8,000 hours, replacement of the lost material and/or the above parts become necessary, the guarantee period will again be valid for 8,000 hours from the date of repair. The replacement has to be repeated until the cavitation guarantee is fulfilled with respect to the weight of the removed material and the guarantee period.	Please modify the existing clause as: If during the guarantee period of 8,000 hours, replacement of the lost material and/or the above parts become necessary, the guarantee period will again be valid for 8,000 hours from the date of repair. The replacement /repair has to be repeated until the cavitation guarantee is fulfilled with respect to the weight of the removed material maximum up to two (2) nos. of repair / replacement or end of the Project's Defect Notification period whichever is earlier.	The provision remains unchanged.
28	Section 5: ER—Part II—PTS—Mechanical	1. Hydraulic Turbines 1.2.8 Cavitation Pitting	Please remove the existing clause.	The provision remains unchanged.

Queries and Response-2 for Electro Mechanical Works, IFB No.: ICB-EM-01/TGS/BBDMP/2078-079 of BBDMP

SN	Clause No.	Modification/Clarification Requested by Bidders	Queries/Modification/Clarification requested by Bidder	Reply from Client
		In addition, the Contractor shall also be liable to bear the revenue cost lost due to loss of generation		
29	Section 3: Evaluation and Qualification Criteria—2.9. Qualification of Manufacturer—(b)	The manufacturers associated with the Bidder are also required to submit the “Deed of Joint Undertaking to be Executed by Bidder’s Associate” as per the attached form.	The Form for “Deed of Joint Undertaking to be Executed by Bidder’s Associate” should be waived off and can be removed from the PQ requirement as the most of the reputed Generator, Generator Step Up Transformer and Circuit Breaker supplier are reluctant to provide the same at this stage.	The provision remains unchanged.
30	Section 8: Particular Conditions of Contract—Sub-Clause 4.10. Site Data	The Contractor shall be deemed to have also satisfied himself before tendering with: (a) existing conditions and nature of existing roads and bridges and other means of access to the Site;	Kindly provide us the Transportation Dimensions and Weight Limitation for the project.	Regarding the transportation dimension and weight limitation A TBM Machine with a cutter diameter of 5.04 m have been successfully recently mobilized and demobilized in the Project Site.