Procurement ID: CB No: MCA-M/CF/WRA/W/02

Bidding Document for the Construction of the Conveyance System and CHPP-3 and CHPP-4's Modification and SCADA

ANSWERS TO CLARIFICATION QUESTIONS – ISSUE No. 4 (Questions 22-51)

February 28, 2023

Questions and Answers 1-2 issued to all registered Bidders on January 26, 2023 Questions and Answers 3-6 issued to all registered Bidders on January 31, 2023 Questions and Answers 7-21 issued to all registered Bidders on February 09, 2023	
Question 22:	Is it possible for Chinese-state owned company to participate for this bidding/Water transmission system, TPP-3, TPP-4 modification works, technological control system (SCADA) construction contract?
Answer 22:	As stated in Section I of Part 1 of the Bidding Documents - Instructions to Bidders - ITB 5.5: "*Government-Owned Enterprises ("GOEs") are not eligible to compete for MCC-funded contracts for goods (which includes contracts for the supply and installation of information systems) or works. GOEs (a) may not be party to any MCC-funded contract for goods or works procured through an open solicitation process, limited bidding, direct contracting, or sole source selection; and (b) may not be prequalified or shortlisted for any MCC-funded contract for goods or works anticipated to be procured through these means. This prohibition does not apply to Government-owned Force Account units owned by the Government of the MCA Entity's country, or Government-owned educational institutions and research centers, any statistical, mapping or other technical entities not formed primarily for a commercial or business purpose, or where a waiver is granted by MCC in accordance with Part 7 of MCC Program Procurement Guidelines. All Bidders must certify their status as part of their Bid Submission"* This applies to Government-Owned Enterprises of all countries. **MCC does not allow government-owned enterprises of any country to compete for contracts for goods or works.** MCC may also consider any firm incorporated and organized in a country with a non-market economy to be a government-owned enterprise, which makes the firm ineligible to compete. As set forth in ITB 5.3:*"A Bidder, all parties constituting the Bidder, and any subcontractors and suppliers for any part of the Contract, including related services, may have the nationality of any country, subject to the nationality restrictions specified in this Section 5. An entity will be deemed to have the nationality of a country if such entity is constituted, incorporated, or registered in, and operates in conformity with, the provisions of the laws of that country*." Furthermore, Section IV of the IFB - Bid submission Forms – contains Form ELI-4: Beneficial Ownership Disclosure Form (BODF). This Form is to be completed by each

Bidder. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission. For the purposes of this Form, a Beneficial Owner of a Bidder or of a joint venture member is any natural person who ultimately owns or controls the Bidder or joint venture member by meeting one or more of the following conditions:

- directly or indirectly holding 10% or more of the shares
- directly or indirectly holding 10% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder or joint venture member.

Question 23:

With regard to the Bills of Quantities (BOQ). Please confirm the unit and quantity for the following items:

Items	Description	Unit	Quantity
II.3.1.1	Placing of concrete for bases, footings, pile caps and ground slabs, lean concrete B10	m3	0.00
II.3.1.3	Pouring of basement for equipment B25	m3	0.00
II.3.1.5	Placing of concrete Bases, footings, pile caps and ground slabs, for slab for basement B25	m3	0.00
II.3.2.1	Placing of concrete bases, footings, pile caps and ground slabs, B20	m3	0.00
II.3.2.2	Precast concrete lintels B20	m3	0.00
II.3.2.4	Reinforcement of brick wall by armature	ton	0.00
II.3.4.3	Excess or shortage of armature shall be calculated separately	ton	0.00
II.3.5.4	Placing of concrete Bases, footings, pile caps and ground slabs, slab B20 /at level 6.6h/	m3	0.00
II.3.5.5	Pouring of precast concrete beam for slab B20 /at Level 6.6h/	m3	0.00
II.3.5.8	Placing of metal bearing in concrete	ton	0.00
II.3.6.2	Reinforcement of brick wall by armature	ton	0.00
II.3.6.5	Placing of lintels DYa 15.38.22	p	0.00
II.3.7.13	Preparation of metal mesh for floor	ton	0.00
II-2.4.3.03	Preparation and assembling metal stairs	ton	0.00
II.10.3.8	ES	nos	0.00
II.10.3.9	Server	nos	0.00
II.10.4.5	Male Connector 1/4" OD x 1/4" NPT (Item : 131, Material:SS 316)	nos	0.00
III.3.1.7	Galvanized metal stairs	ton	0
III.3.1.10	Preparation of wooden cover insulated	m2	0
III.3.1.11	Brickwork, Blockwork and Masonry, Engineering brickwork on access	m2	0
III.3.2.8	Galvanized metal stairs	ton	0
III.3.2.11	Preparation of wooden cover insulated	м2	0
III.3.2.12	Brickwork, Blockwork and Masonry, Engineering brickwork on access	м3	0
III.3.3.8	Galvanized metal stairs	ton	0
III.3.3.12	Brickwork, Blockwork and Masonry, Engineering brickwork on access	м3	0
III.3.5.5	Reinforcement of pump pedestal /armatures that are shorting in the norms/	ton	0

Items	Description	Unit	Quantity
III.5.2.2.1	Technical Water Pumps (Type: Axial split casing centrifugal pump, Rated capacity: 100 m3/h, Rated head: 80 MWC, speed:1440RPM), Drive motor rated 45 kW & rated speed 1440RPM, consist of Flexible coupling with minimum rating 100 kW, coupling guard, common base frame, Anchor bolt for pump & motor to base frame and anchor bolt for base from to RCC foundation.		2
III.5.2.3.1	Cooling Water Pumps (Type: Axial split casing centrifugal pump, Rated capacity: 350 m3/h, Rated head: 70 MWC, speed:1440RPM), Drive motor rated 110 kW & rated speed 1440RPM, consist of Flexible coupling with minimum rating 240 kW, coupling guard, common base frame, Anchor bolt for pump & motor to base frame and anchor bolt for base from to RCC foundation.		2
III.6.2.31	Empthy		
III.6.4.4	CS PIPE, BE, DN150, EN-P265GH, SEAMLESS, 4.5mm (with Internal Lining as per Technical Specification)	m	0
III.6.5.4	CS PIPE, BE, DN125, EN-P265GH, SEAMLESS, 4.0mm (with Internal Lining as per Technical Specification)	m	0
III.6.18.4	CS PIPE, BE, DN100, EN-P265GH, SEAMLESS, 3.6mm (with Internal Lining as per Technical Specification)	m	0
III.7.15.13	Circulating pump 2		
III.8.1.11	SOV	nos	0
III.8.1.2.9	6T X 1.5sqmm cable	m	0
III.8.1.3.20	Engg.Console	nos	0
III.8.1.4.19	CAP 1/2" NPTF, 3000# (Item 658, Material: SS 316)	nos	0
III.8.1.4.20	Still Well	nos	0
III.8.2.1.1	Magnetic level switch with FG	nos	0
III.8.2.2.1	12T X 1.5sqmm cable	m	0
III.8.2.2.2	10C X 1.5sqmm cable	m	0
III.8.2.2.3	5C X 1.5sqmm cable	m	0
III.8.2.2.4	2C X 1.5sqmm cable	m	0
III.8.2.2.5	3CX 2.5sq mm cable	m	0
III.8.2.2.6	12P x 1sqmm cable	m	0
III.8.2.2.7	6P X 1sqmm cable	m	0
III.8.2.2.8	2P X 1sqmm cable	m	0
III.8.2.2.9	6T X 1.5sqmm cable	m	0
III.8.2.2.10	24 Core Single Mode Armoured FO Cable	m	0
III.8.2.4.3	Tube, 1/4" OD (Item : 118, Material:SS 316)	m	0
III.8.2.4.5	Male Connector 1/4" OD x 1/4" NPT (Item: 131, Material:SS 316)	nos	0
III.8.2.4.7	Reducing Male Connector 1/4 "OD x 1/2" NPTM (Item: 143, Material: SS 316)	nos	0
III.8.2.4.8	Reducer 3/4"SW (M) x 1/2"OD (Item: 156, Material: SS 316)	nos	0
III.8.2.4.10	Flow Chamber 50mm Dia x 150mm Ht, 2 x 1/2" NPTF Ports (Item: 230, Material: SS 316)	nos	0
III.8.2.4.21	Still Well (ITEM:1017, SS316)	nos	0

Items	Description	Unit	Quantity
III.8.3.1.2	Reflex type level gauge	nos	0
III.8.3.2.1	12T X 1.5sqmm cable	m	0
III.8.3.2.2	10C X 1.5sqmm cable	m	0
III.8.3.2.3	5C X 1.5sqmm cable	m	0
III.8.3.2.4	2C X 1.5sqmm cable	m	0
III.8.3.2.5	2CX 2.5sq mm cable	m	0
III.8.3.2.6	12P x 1sqmm cable	m	0
III.8.3.2.7	6P X 1sqmm cable	m	0
III.8.3.2.8	2P X 1sqmm cable	m	0
III.8.3.2.9	6T X 1.5sqmm cable	m	0
III.8.3.2.10	24 Core Single Mode Armoured FO Cable	m	0
IV-1.2.03	Disposal of excavated material including topsoil, rock, or artificial hard material to distance of 10 km	m3	13
IV-1.3.03	Disposal of excavated material including topsoil, rock, or artificial hard material to distance of 10 km	m3	265
IV-1.4.03	Disposal of excavated material including topsoil, rock, or artificial hard material to distance of 10 km	m3	430
IV-1.5.03	Disposal of excavated material including topsoil, rock, or artificial hard material to distance of 10 km (for water reserVoIr embankment)	m3	1,084
IV-2.5.1.07	Galvanized metal stairs	ton	0
IV-2.5.2.04	Placing of concrete beams B15	m3	0
IV-2.5.2.09	Galvanized metal stairs	tn	0
IV-2.5.3.07	Galvanized metal stairs	tn	0
IV-2.5.4.07	Reinforcements	tn	0
IV-2.5.4.09	Galvanized metal stairs	tn	0
IV-2.6.1.1.08	Placing of metal detail in the concrete	ton	0
IV-2.6.1.1.16	Placing of metal bearing in concrete	ton	0
IV-2.6.1.1.17	Painting of electricty hoist monorail details	ton	0
IV-2.6.1.2.05	Reinforcement of block wall by armature	ton	0
IV-2.6.1.2.07	Reinforcement of brick wall by armature	ton	0
IV-2.6.1.3.12	Preparation and installation of metal roof ladder	ton	0
IV-2.6.1.7.03	PreparatIon and InstallatIon of metal handrail	ton	0
IV-2.6.1.7.04	Painting of metal elements	ton	0
IV-2.6.1..8.04	To prepare metal elements to be installed to the concrete	ton	0
IV-2.6.2.2.04	Placing of metal detail In the concrete	ton	0
IV-2.6.2.2.11	Placing of metal bearing in concrete	ton	0
	Installation of concrete lintels type 3	p	1
IV-2.6.2.8.03	Preparation and assembling galvanized metal stairs	ton	0
IV-2.6.2.8.04	Painting by 2 layers	ton	0
IV-2.6.3.1.03	armature	ton	0
IV-2.6.3.1.10	placing of metal bearing concrete	ton	0
IV-2.6.3.2.01	Brick masonry and other reinforcement	ton	0
IV-2.6.3.2.09	Stair installation	ton	0
IV-2.6.3.6.04	To prepare metal elements to be installed to the concrete	ton	0
IV-3.1.2.01	Raw Water Pumps (Type: Axial split casing centrifugal pump, Rated capacity: 15m3/h, Rated head: 20 MWC, speed:980RPM), Drive motor rated 3.5kW & rated speed 980RPM, consist of Flexible coupling with minimum rating 5.25kW, coupling guard, base frame and anchor bolt for base from to RCC foundation.	???	2

	Items	Description	Unit	Quantity
	IV-5.1.14	Fixing of metal elements on wall by drilling concrete wall	ton	0
	IV-6.2.2.02	10C X 1.5sqmm cable	m	0
	IV-6.2.2.03	5C X 1.5sqmm cable	m	0
	IV-6.2.2.05	6 Core Single Mode Armoured FO Cable	m	0
	IV-6.3.1.03	Temperature element (RTD) with Thermowell (-5 - 100 Deg C)	nos	0
	IV-8.2.01	Antiscalant Dosing tank with agitator (Type: Vertical FRP tank, Rated capacity: 2day working volume)		1
	IV-8.3.01	Corrosion Inhibitor Dosing tank with agitator (Type: Vertical FRP tank, Rated capacity: 2day working volume)		1
	IV-8.4.01	Corrosion Inhibitor Dosing tank with agitator (Type: Vertical FRP tank, Rated capacity: 2day working volume)		1
	IV-8.5.01	Bio-Dispersant Dosing tank with agitator (Type: Vertical FRP tank, Rated capacity: 2day working volume)		1
	IV-8.6.01	Bio-Dispersant Dosing tank with agitator (Type: Vertical FRP tank, Rated capacity: 2day working volume)		1
	IV.9.1.04	InstallatIon of UTP2x2x0.5mm2, Cat 6 Indoor cable	100m	0
	IV.9.4.04	InstallatIon of UTP2x2x0.5mm2, Cat 6 Indoor cable	100m	0
	IV-9.12.02	InstallatIon of UTP2x2x0.5mm2, Cat 6 Indoor cable	100m	0
Answer 23:	Quantities stated with 0 are to mean 0. In the measurement section of "The Annex-1 preamble," it states: *"The quantities given in the bill of quantities are only estimations. In no sense shall such quantities be considered as limiting or extending the amount of the work to be done by the Contractor and of the materials to be supplied by him."* And in the general section, *"Every item in the bill of quantities should be priced. It shall be deemed that the value of any item left unpriced in any of the Bills is either included in the rates for other items or that the Contractor required no payment in respect thereof. All other items which do not appear in the bill of quantities shall be considered as included in the rates of other items."* Please see the preambles of the Bidding Document.			
Question 24:	Could you clarify the survey equipment for the use by the Employer according to the BOQ A.2.5? What type of survey equipment included in this item?			
Answer 24:	Standard survey equipment for checking levels and positions of the constructed works on site; for taking measurements, and for other similar activities. This can include dumpy level, theodolite total station, handheld GPS, tape measures, spirit levels, pegs, lines, etc.			
Question 25:	According to the Trenchless locations, current trenchless works are defined on the road. There is one more road remained before pass the Dund gol. Could you clarify on this issue?			
Answer 25:	The road before passing the Dund Gol channel is a small road that does not need a trenchless crossing. Bidders should price their Bids based on the drawings and other information provided in the Bidding Documents.			
Question 26:	As per the Government regulation's a Special Licenses for Shaft sinking and Tunnelling is required Will the Special Licenses be required for the Shafts and Pipejacking on this Project?			

Answer 26:	The Bidder shall conduct all necessary investigations, surveys, and due diligence according to the requirements for permitting and licenses for their performance of the works. As per ITB 15.10, the Contractor shall be responsible for obtaining all permits, approvals, and licenses required, while the Employer shall assist in obtaining these as per ITB 1.3.
Question 27:	Items will be paid per rates in BOQ, if no is included in BoQ how it will be paid? For example, there is no Item BOQ for void filling around sleeve or inside sleeve.
Answer 27:	The Bidder should carefully read the preambles to the BoQ to understand the full extent of the bill items. It states, '*All other items which do not appear in the bill of quantities shall be considered as included in the rates of other items.'*
Question 28:	What type of material will the Void around the outside of sleeves be filled with? Cement Grout, Foam Grout?
Answer 28:	This is detailed in the drawing I-7.19-MCA-T.7-CS-DD090-DWG-TM-408-STD.
Question 29:	What type of Material will the inside of sleeves be filled with, if any?
Answer 29:	Please refer to the response to Question 28.
Question 30:	There is a requirement for a cable to be inserted in sleeve, will it be in plastic pipe or in open?
Answer 30:	In the BOQ, it is indicated as an HDPE Pipe. Please see in BOQ's II CS - C3T&BPS - II.10.2.11, in Annex 2, Appendix-A General technical specification's 1.1.4 System components and side note of drawing I-7.12-MCA-T.7-CS-DD090-DWG-TM-401-STD.
Question 31:	a) As some of the shafts are deep, and in the highway, where can the Bidder locate shafts drawings. b) If no drawings will the Contract get paid for his design drawings of shafts.
Answer 31:	a) If the shafts refer to the Trenchless crossing, the depth and general location can be seen from the drawings I-2.04-MCA-T.7-CS-DD090-DWG-TM-201-LP to I-2.23-MCA-T.7-CS-DD090-DWG-TM-220-LP, and typical detail is in the I-7.12-MCA-T.7-CS-DD090-DWG-TM-401-STD. b) The drawings related to construction methods, such as shop drawings or work drawings, are the Contractor's obligation, and they should be included in the Bidder's cost. As the method for the trenchless crossing may differ due to the Contractor's chosen method, the Contractor will need to consider the space left outside the site of the shaft construction for sufficient access.
Question 32:	As the site investigation was done in summer months, there is no mention of Permafrost which can get to depth of 100 meters in some areas. How it will be classed for payment. Rock, hard, or special rate?
Answer 32:	The Bidder should use the information provided in the geotechnical report for the soil conditions. The seasonal freezing depth of the soil is given in the report.
Question 33:	If the Government will not allow for night time working which is requirement on Pipejacking, will there be extra over rate if Pipe get stuck due to stoppage of night-shift.
Answer 33:	The Bidders shall allow all costs related to their envisaged working method and working hours at the rates included in the BoQ. If the bid price assumes working hours outside the

	normal working hours stated in the specification, Bidders should clearly state their assumption in Form TECH-3. The selected Contractor shall submit a request to the Engineer for approval if the Contractor plans to work outside of normal working hours. Additionally, per FIDIC Condition 8.6, the Contractor is responsible for compensating additional cost to the Employer associated with working outside of normal working hours.
Question 34:	Have any calculations been done regarding the pressure of the Permafrost on the sleeves as this will affect, the walls thickness?
Answer 34:	No. Permafrost was not observed nor reported in the Geotechnical Report. The wall thickness is shown in the structural design drawings.
Question 35:	What are the maximum tolerances of settlement under Railway, and roads?
Answer 35:	The Bidders shall refer to the relevant Mongolian norms if not stated in the Bidding Documents.
Question 36:	With regard to Section VI of Part 2 of the Bidding Documents - Work Requirements: - Annex 2-Tech Specs and Drawings" - Appendix B Design Datasheet. Please provide the Datasheets for Dosing pumps, Scale Inhibitor, Corrosion inhibitor, Anti-scalant dosing
Answer 36:	This is for the bidder to propose based on the dosing rates indicated in the bidding documents. Please refer to Annex B.2 (Particular Technical Specification) Section 2.6.2 under Annex B (Specific Technical Specification).
Question 37:	With regard to Section VI of Part 2 of the Bidding Documents - Work Requirements: Annex 1 - Bill of quantity locked and Appendix B Design Datasheet - Chemical Dosing System There might be discrepancy between BOQ and Datasheet. BOQ states Rated capacity: 15m3/h, Rated head: 20 MWC, but Datasheet states - (Rated flow: 25m3/h, Rated head 16 mWC). Please clarify.
Answer 37:	Please follow the Data Sheet information.
Question 38:	With regard to Section VI of Part 2 of the Bidding Documents - Work Requirements: Annex 1 - Bill of Quantity locked and Appendix D ESMP - Conveyance System - 9 ESMP Cost Estimation. Provisional Estimate for CESMP development indicates US $20,000. Are there any Provisional Cost Estimations dedicated for CESMP during the Construction period? Shall the Bidder develop these Cost Estimations
Answer 38:	No Provisional Sum for the CESMP has been allowed for in the BoQ. It is for the bidder to price.
Question 39:	With regard to Section VI of Part 2 of the Bidding Documents - Work Requirements: Annex 1 - Bill of Quantity locked and IV.6 Control and Automation Works à Excel sheet IV CHPP#4

	IV.6.4 Well for Flowmeter #1; IV-6.4 Well for Flowmeter #2 are repeated after IV.6.6.6.1.02 Earthing Cable 16sqmm Copper Multistrand. By repeating in III.6.7 Well for Flowmeter #1 and III.6.8 Well for Flowmeter #2. Please kindly verify and explain why these items are being repeated
Answer 39:	Duplicates will be removed in the revised BOQ, which will be issued with an Addendum to the Bidding Documents.
Question 40:	With regard to Section VI of Part 2 of the Bidding Documents - Work Requirements: - Annex 2-Tech Specs and Drawings" - Appendix E Design Datasheet. I-9.07-MCA-T.7-CS-DD090-DWG-521-IC There are IMH Manholes indicated in the drawing. Please provide Layout, Section drawings if there are any. Please clarify and detail how to locate FO Splicing boxes inside these manholes.
Answer 40:	Please refer to the drawings MCA-T.7-CHPP4-DD090-DWG-518-IC for typical manhole details.
Question 41:	Will the crossings of the roads be done by drilling, or they will cut and dug?
Answer 41:	The bidding documents specifie that Drilling or Pipe jacking is considered at the trenchless crossing points. In places without trenchless crossings, it is planned to be constructed using an excavation.
Question 42:	Is there any map (project) for underground installations such as electric cables, internet, water supply network, sewage etc.?
Answer 42:	The underground infrastructures are indicated on the layout drawings, which are included in the bidding documents.
Question 43:	What Specification are you using for Pipe Jacking?
Answer 43:	Please refer to GTS Section 8 (Trenchless Requirements) and the associated drawings.
Question 44:	Is the carbon steel and ductile iron butterfly valve's structure a concentric or eccentric type?
Answer 44:	Concentric-type valves to be used.
Question 45:	Is the Chemical Dosing System detailed design within the Contractor's Scope or client scope? (Not shop drawing)
Answer 45:	The requirements of the chemical dosing system are in the bidding documents. Still, based on the contractor's chosen vendor's suggestion, the design of the dosing system may be subject to change during the execution of the Contract. Any such design change will be a Contractor's responsibility.
Question 46:	With regard to the Fiber Optic cable route, Have any specific splicing points have finalized?
Answer 46:	There are no specific splicing points given for the Fiber Optic cable. However, any required splicing points shall only be located within a chamber or manhole.
Question 47:	With regard to the SCADA system - a) should the SCADA exchange data between the existing SCADA systems of CHPP #3 and CHPP #4?

	b) Are there any preferable brands for PLC hardware and SCADA software from existing CHPP #3 and CHPP #4?
Answer 47:	a) We have only an exchange of data between the existing water system control system and CHPP #4 PLC & also existing Water system in CHPP #4 shall be controlled from the new System; however, the details of a number of I/O's are provided in the amendment. There is no exchange of data between the new and existing PLC in CHPP#3. **(Please disregard the response to the Question 12 in Clarification 3 issued to all registered Bidders on February 09, 2023 and replace it with the above answer to the Question 47 (a)).** b) Please follow the specifications.
Question 48:	Are there all pipe tie-in points have any schedule which is accepted CHPP #3 and CHPP #4?
Answer 48:	The tie-in points within the CHPPs are indicated on the drawings. There are no specific schedules for this. All defined works within the CHPPs have been agreed upon with the Operators.
Question 49:	The project has a very complicated terrain. The route is designed through the lands of different owners, and the pipeline route is also planned around drinking water wells for Ulaanbaatar. As it is agreed with them, won't there be any problem?
Answer 49:	The Resettlement Action Plan is under implementation, which will deal with any land and resettlement issues. Therefore, during the implementation of the Works, there will be no land ownership issues along the route of the pipelines. The route of the pipeline has been approved by all authorities, including passing through the area adjacent to the well field.
Question 50:	Who is responsible for the Work permissions of the cross sections with other infrastructures (such as main roads, railways, pipelines etc.)?
Answer 50:	Please refer to the response to Question 26.
Question 51:	Will the Clint provide a place for a warehouse and workshop for the Contractor inside CHPP-3 and CHPP-4? If so, what will be the cost?
Answer 51:	Storage and workshop spaces within the CHPPs are also available, although not defined. Employer will not give warehouse and workshop space inside the CHPPs area; if it is crucial to have a heated storage area, the employer can assist the contractor in communicating with the CHPPs on this matter.