UCH COMPRESSION PROJECT

Design Engineering, Procurement (Supply), Construction, Installation/Erection, Pre-Commissioning, Commissioning & Start-up (including performance testing and Reliability Guarantee Test) of Compression System at UCH Compression Project

Tender Enquiry No. PROC-FC/CB/PROJ/UCH(COM)-4462/2019

Pre-Bid Clarification-9

Sr.	Reference	Queries	Responses
1	Single Line Diagram of File Named IIC Electrical of VOI -II	From the SLDs provided with the tender package, we understand that in total, two new MV circuits are to be furnished by bidder/Contractor, i.e. 1 No. existing 1200kW MV starter panel in existing UCH-II MV switchgear to be modified by Contractor into an MV feeder circuit (to new transformer TR-02B) incorporating necessary circuit/transformer protections similar to existing scheme of drawing ((3) A2678 S175-A2). & 1 No. new MV panel/feeder circuit is to be provided (to feed the new transformer TR-02A) and tied-in to existing MV switchgear at UCH-I with similar existing scheme as of drawing (3)A2678 S13. Please confirm our understanding.	1- Please refer clouded portion marked on to 4985-ELB-6601-11 (SH 2 of 2) Key Single Line Diagram and 4985-ELB-6602-5 (SH 2 of 3) Single Line Diagram for M.V Switchgear, wherein, scope and modification works in existing panel of MV switchgear at UCH-II is delineated in detail. And minimum requirements mentioned on to existing schematics of transformer feeder ((3) A2678 S175-A2) shall be followed as stated in subsequent notes of aforementioned drawings. & 2- Please refer 0221-ELB-6600-0 (SH 1 of 2) Single Line Diagram 0.4kV Switchgear-MCC, where in scope relevant to new MV panel and coupling with existing panel at UCH-I as required to power-up TR-02A is delineated in detail. And minimum requirement mentioned on to ((3) A2678 S13) shall be followed. **Note:** Please note that responses provided by OGDCL/ENAR against the raised clarifications are the basic & minimum required and shall not relieve the bidder of any responsibility or liability imposed upon it by any provision of tender document. It is his responsibility, as a part of their due diligence, shall review and fully acquaint

			himself with the scope, conditions and limitations at sites and all works that are necessary to provide safe & efficient design of the systems, tie-in & interfacing works, to meet the objective of the project even not explicitly mentioned but can be inferred from scope or other project documents shall be the responsibility of the bidder and provided accordingly without any additional cost and time.
2		With reference to above query Sr.# 1, provided Tender Document doesn't contain drawings of existing panels as referred in different SLDs, such as: a. (3) A2678 S175-A2). b. (3)A2678 S13 c. (3)A2678 S103-A2 Please provide the same.	Necessary information as required to ascertain the scope of work have already been provided, please refer aforementioned single line diagrams, along with project specifications. Vendor drawings as required will be submitted after award of contract. Any further detail, if required, will be collected/verified by bidder during pre-bid site visit.
3	Furthermore, in general, please provide vendor drawings / general Arrangement drawings of existing MV panels at UCH-I and UCH-II, specially the GA drawings showing internal arrangements of existing 1200kW motor panel at UCH-II and the existing UCH-II panel which is to be used for tie-in with the new MV panel.		Please refer our response against the serial no. 02. For general UCH-I panel arrangement details, please refer MCC-UCH-I-LO MCC Layout (UCH-I).
4	Single Line Diagram of File Named IIC Electrical of VOI II & Electrical Design basis (0221-ELA-6501)	Notes in various Single Line Diagrams as well as the Electrical Design basis (0221-ELA-6501) requires the Contractor to provide MV panels of existing make /OEM. Please communicate Vendor name and panel models/ series for MV panels at UCH-I and UCH-II.	Since the work involved at UCH-II is modification in existing MV Switchgear, therefore, vendor of existing MV switchgear is preferred, so that work can be performed without jeopardizing the integrity of existing panel. Similarly, work involved at UCH-I is coupling of new panel with existing panels and due to space constraints, vendor of existing Switchgear is preferred, Below are existing panel details: Production type: P1X-12 of SCHNIDER Electric, Pakistan and year of production 2013-2014. Any further detail, if required, will be collected/verified by bidder during pre-bid site visit

5	Clause 5.3.8 & 5.3.10 of Electrical Design basis (0221-ELA-6501)	As per the Clause 5.3.8 & 5.3.10 of Electrical Design basis (0221-ELA-6501), Contractor is required to carry out electrical studies (load flow, motor transient, fault level, coordination and harmonics study) to verify adequacy of existing system in face of new load additions. We understand that client will provide existing electrical studies / model (specially the native ETAP files), so that Contractor could update new loads on same to carry out the said activity). We also understand that Contractor should not be expected to build entire UCH-I and UCH-II existing electrical network (and existing loads) from scratch to carry out the adequacy check resulting from new project. Please confirm our understanding.	Entire network of UCH-I & UCH-II to be built/developed by EPCC Contractor/bidder, however, existing studies available in report format (PDF not native/setup files) is available and shall be shared with bidder after the award of contract, however, aforesaid study was conducted at the time of very early stages of previous projects, therefore, as far as practicable, updated data shall be inputted/fed and it is the responsibility of bidder to collect the data at their own, as far as practicable, from the site and from project deliverables available in documented format. All the software set-up files of required studies shall be shared by with client, along with detail reports.
6	Clause 5.7 of "Scope of Work" & P&IDs of VOI-II	With reference to clause 5.7 of the "Scope of Work", to avoid spurious tripping, it is mentioned that "EPCC Contractor shall consider 2oo2 (2 out of 2) voting system and configuration for all Instruments (transmitters & switches) serving process shutdown in compressor package". The same is not consistent with the instrumentation shown in FEED P&ID, where 2oo2 philosophy is not depicted. Furthermore, we understand that 2oo2 logic should only be	Bidder to note that 2oo2 (2 out of 2) voting system and configuration for all Instruments (transmitters & switches) serving process shutdown in compressor package shall be considered. However the consideration of such loops under SIL study shall be finalized during detail engineering stage.

		applied judiciously and only on safety loops with very low required SIL ratings. This is because of the fact that although this reduces the possibility of spurious trip, however at the same time this increases the PFD (probability of Failure on Demand) and can jeopardize the equipment safety as well. Please review and re-consider this requirement.	
7	Clause-5 and 5.14 of "Scope of Work"	Refer section-5 in general and 5.14, in particular, of document "Scope of Work", new instruments on slug catcher are to be connected to UCH-I Plant Control System. We understand that spare IOs are available (including marshalling terminals) in the existing UCH-I Control system (DCS and ESD) for the same. Addition of new IO cards and / or IO cabinets are not required from EPCC Contractor. Please confirm our understanding. Also please provide details of existing Control system (DCS and ESD) at UCH-I, as the same are not provided with the Tender Documents.	We Have 10 spare slots available at Infi 90 (BRC – 410 processor) DCS/ESD System, whose front end is 800XA. Moreover we presume that for slug catcher, these slots are sufficient for I/O with DCS / ESD. Moreover for field termination, there is no space available at existing system to add new I/O's from field side. The total I/O count also depends upon the offered system. The spare I/O cards, termination modules along with cabinet at UCH-I hence to be incorporated in the bidders supply. Further Bidder should collect this information during pre-bid site visit and may further clarify during pre-bid meeting.
8	0221-IMF-6000-0 (Control System Architecture)	We understand from Control System Architecture Drawing that new "DCS extension panel" is required. The notes mentioned in the drawing mention that new "DCS Controller" is required for new IOs. Please clarify if a new DCS controller is required or the extension panel covers only addition of IOs (and necessary additional serial	Bidder to note that extension Panel shall be complete DCS comprise of redundant controller, I/Os modules, redundant power supplies and other accessories complete in all aspects as per the basic requirements mentioned in this document and relevant project documents / drawings. EPCC contractor shall consider minimum of 25% spares to the actual I/O counts before designing New DCS extension system. The existing installed DCS

		interface modules, etc.). Also please share existing DCS vendor network drawing (and relevant details) of UCH-II DCS, since compatibility with existing system is to be ensured.	system is of ABB 800XA and therefore same Make/Model shall be preferred for new extension panel.
9	Similarly for UCH-II safety loops, the tender documents mentions use of existing ESD system for tie-in of new hardwired IOs. Please confirm if adequate spares IOs are available in ESD system and that addition of new IO cards is not in EPCC Contractor' scope.		Spare I/O are available in plant existing ESD System at UCH-II. It may further be elaborated and reviewed at later stage when the I/O Count is going to finalize.
10	Given the small number of new IOs on each wellhead (related to Methanol inj. Skid), we understand that these instruments are to be connected to available spare IOs in existing WHCP. Please confirm.		Bidder should collect this information during pre-bid site visit and may further clarify during pre-bid meeting.