

PRE-BID TECHNICAL QUERIES & REPLIES - CONSOLIDATED AS ON 02/08/2013

Client : BHEL	Document : Pre-bid Technical Queries
End User : IOCL VADODARA	Revision : 0
Project : IOCL VADODARA CPP	Date : 02/08/2013

Vendor's Query & BHEL's Reply

Sl. No	Page no / Clause No.	Point No. / Description	Vendor's Query	Customer's Reply
Document no.: CE/415/BoP/0930/00				
1	Pg. No. 8 of 23 /Cl. No. 6.3	Vendor shall give redundant MODBUS communication port for the same. In addition, shall include all hardware and software required at PLC end for the establishment of communication. The necessary components like switches, firewalls etc shall be mounted on dedicated PLC network panel. Make of components shall be provided to vendor during detailed engineering.	Presently we will be considering hardware and software required at offered PLC end. We understand that the hardware and software at DCS/Third party end will be at DCS/Third party's scope of supply.	PLC Vendor to provide redundant MODBUS Communication port alongwith all required hardware and software at the PLC end.
2	Pg. No.11 of 23 /Cl. No.11.5	Installed Spares - I/O Level(MODULE Wise) 20%.	In RFQ, it is mentioned that we have to supply 'Installed Spares - I/O Level (MODULE Wise)'. We understand that we have to keep 20% spare channels in each module. Please confirm.	Yes, Vendor's comment is Correct.
3	Pg. No. 11 of 23 /Cl. No.11.5	Provision to be made in hardware and software estimation for configuration of additional 5% of All Inputs/Outputs as contingency, over and above the Inputs/Outputs covered in the PLC Input/Output count estimation elsewhere in the specification.	We understand that addition 5% spare needs to be consider over & above 20 % spare. Please Confirm.	Yes, Vendor's comment is Correct.
4	not mentioned	Common cabinet are considered for analog and digital signals	Please confirm.	System cabinets are considered Common, But Marshalling Panels are to be considered for analog and digital signals separately.
Document no.: CE/415/BoP/0930/01				

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5	Pg. No.3 of 49 /Cl. No.1	This specification defines the minimum requirements of a distributed control system & emergency shutdown system designed for reliable, effective and optimum control, monitoring & emergency shutdown of a process plant. Where any conflict exists between this specification and the attachments, the Owner shall be consulted before proceeding with procurement/engineering. The CONTRACTOR shall not deviate from this specification without the prior written approval from the Owner.	We understand that DCS is not in our scope, our scope limits to supply and installation of BMS/ESD PLC . Kindly confirm.	DCS is not in the Vendor's scope of supply.Further for BMS/ESD PLCs, the scope of work for the Vendor is listed in the Document, CE/415/BoP/0930/00, Rev No.00, Page 4 of 23, Cl No.1.
6	Pg. No.7 of 49 /Cl. No.5.14	The system shall be suitable for power supply as specified in this specification. Suitable battery back-up shall be provided for volatile memory protection only. DCS/PLC/ESD/other systems shall be capable of operating on floating or grounded UPS power supply. Exact type of UPS supply shall be confirmed during detail engineering.	We understand that supply of UPS and Batteries are not in our scope.Kindly confirm.	Confirmed.

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7	Pg. No.10 of 49 /Cl. No.8.4	Hart maintenance system (HMS) shall be used for remote calibration, configuration viewing/modifications, diagnostics & performance monitoring of HART field instruments. The HMS shall be from Emerson AMS suite	We understand BMS and ESD AI needs to be HART compatible. For the same we will be offering AI modules with external HART system.However we understand the HMS system will be offered by DCS vendor, also the serial cable required for connectivity of ESD HART signals to HMS system will be in DCS vendors scope.	HMS system is in the DCS Vendor's scope of suply. Furter, the serial cable required for connectivity of ESD HART signals to HMS system will be in PLC Vendor's scope. HMS Vendor's details will be provided to successful bidder.
8	Pg. No.10 of 49 /Cl. No.8.4	DCS/PLC/GTG control system shall have OPC connectivity to ERP/MIS system. The data from the multi OEM control systems shall be made available for IOCL MIS system using OPC. Data from all the system shall be used for monitoring and analysis as per IOCL systems. OEM shall also provide necessary software / hardware (OPC server & software) and manpower support / assistance for establishing connectivity of the system with ERP & APC. The OPC server system should have minimum 5000 tags capacity & capability.	We understand that supply of OPC server will be in DCS vendor scope and not be in Honeywell scope. Kindly confirm.	OPC server is in the DCS Vendor's scope of suply. Further, PLC Vendor has to be OPC Compliant. Necessary Software / Hardware to be provided by PLC Vendor for connectivity to IOCL MIS, in line with specification.
9	Pg. No.29 of 49 /Cl. No.15	Redundant earth pits & bus shall be provided for the system earth. Both earth pits shall be connected to form a ring.	We understand that supervision of I&C is in Honeywell scope & hence making of earth pits is not in honeywell scope.	For Earthing of Vendor's supplied systems, Kindly refer the Document, CE/415/BoP/0930/00, Rev No.00, Page 10 of 23, Cl No.9.

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10	Annexure-1 / PART-1	General	We understand that, this document is common for DCS & PLC specifications. Hence there are many points are related to DCS which is not in Honeywell scope of supply. For such points we need not to give compliance. Please confirm.	Vendor to mention the points that need clarification.
Document no.: CE/415/BoP/0930/06				
11	IO COUNT	Relay for DO signals	In IO summary, For DO signals mentioned with RELAY we need to supply SIL3 relays. Please confirm. DO signals mentioned with P.F. (Potential free) do we also need to supply SIL3 relays? Please clarify.	Kindly refer the Document, Annexure-2,CE/415/BoP/0930/02, Rev No.00, Page 3 of 6, Title - Interposing Relays.
Document no.: CE/415/BoP/0930/00				
12	Pg no: 6 of 23 CI no: 4.3	SEQUENCE OF EVENT	We are proposing PLC with integral Sequence of event recording and no separate SER is offered. Resolution of SER shall be same as PLC scan time.	Yes, Vendor's comment is Correct. The resolution of sequence of event recording shall be minimum of 100 milliseconds.
Document no.: CE/415/BoP/0930/01				
13	Pg no: 20 of 49 CI no:11.1	SEQUENCE OF EVENT	We are proposing PLC with integral Sequence of event recording and no separate SER is offered. Resolution of SER shall be same as PLC scan time.	Yes, Vendor's comment is Correct. The resolution of sequence of event recording shall be minimum of 100 milliseconds.
Document no.: CE/415/BoP/0930/01 & CE/415/BoP/0930/04				
14	Page 13 of 49, /CI 9.2.3,	Communication -	Please let us know whether communication interface for foreign devices like analyser system, anti surge controller, vibration monitoring system and APC computer mentioned in the referred clause is from proposed PLC. This is so as the referred communication interface is not mentioned in the system configuration dwg for PLC enclosed in enquiry & scope of supply document (Annexure 4).	Following foreign devices, 1.Analyser system, 2.Anti surge controller, 3.Vibration monitoring system and 4.APC computer, mentioned in the referred clause are not in the scope of PLC Vendor's supply.

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15	Page 10 of 49, /CI 8.4, Page 19 of 49, /CI 10.0,	HART maintenance system -	Please let us know scope of supply of HART device maintenance system. This is so as the same is not mentioned in the system configuration dwg for PLC enclosed in enquiry & scope of supply document (Annexure 4). Analog inputs and outputs are not mentioned as HART compatible in the I/O summary enclosed as Annexure-5 of enquiry.	HMS system is in the DCS Vendor's scope of supply. Further, the serial cable required for connectivity of HART signals to HMS system will be in PLC Vendor's scope of supply. HMS Vendor's details will be provided to successful bidder. Analog inputs and outputs Modules to be HART Compatible.
16	Page 10 of 49, /CI 8.4, Page 19 of 49, /CI 10.0,	OPC server -	Please let us know scope of supply of OPC server. This is so as the same is not mentioned in the system configuration dwg for PLC enclosed in enquiry & scope of supply document (Annexure 4).	OPC server is in the DCS Vendor's scope of supply. Further, PLC Vendor has to be OPC Compliant. Necessary Software / Hardware to be provided by PLC Vendor for connectivity to IOCL MIS, in line with specification.
17	Page 25 of 49, /CI 12.0,	Aux. Consoles -	Please let us know the specification & No. of assignable recorders to be considered . We also request you to indicate the quantity of instruments to be located on the Aux. console	BHELvision one no (Dimensional details shall be furnished to the successful bidder). For Further details Refer Annexure-5 / DO - HWC for Indications (for HRSG BMS PLC / HRSG BOP PLC). Required Hardwired console to be considered.
18	Annexure-1 (Attachment-1), & Annexure-4, (Page 5 of 7),	Scope of supply -	The OS / ES hardware is mentioned as RAID 1 controller in Annexure-1(Attachment-1), and RAID 5 controller in Annexure-4 (Page 5 of 7). Request you to clarify the same	As per Annexure-4 (Page 5 of 7) / Scope of Supply, The OS / ES hardware / PC to be Minimum Raid-5.

Document no.: CE/415/BoP/0930/00

19	Page 21 of 23, /CI 17.0 - 10,	Clarify whether the following are considered for Price Evaluation -	Recommended spares for 2 years operation with price validity for 2 years period	Yes - Recommended spares for 2 years operation, with price validity for 2 years period, shall be considered for price evaluation.
20	Page 17 of 23, /CI 13a - 1.4,	Clarify whether the following are considered for Price Evaluation -	Post warranty AMC for 5 years	No - Vendor shall submit a proposal / Offer for comprehensive Post warranty AMC of 5 years, for operation & maintenance of complete system with year wise braekup, This shall not be considere for Price Evaluation.

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21	Page 5 of 23, /CI 3.3,	Galvanic isolation to be provided, for all inputs and outputs of PLC.	We recommend BHEL to accept optical isolation.	Optical isolation is accepted. However all the input/outputs shall be through Relay/Barriers.
22	Page 5 of 23, /CI 3.8,	Cable glands, covered cable trays and accessories for vendor supplied cables and Gland Plate in PLC Panel are in PLC vendor's scope of supply.	We assume that Cable termination on Panel side is in our scope. Also System related cables will be mounted on the existing field cable trays. Power cable is not included in Vendor's scope	Cable termination on Panel side is in Vendor's scope. System related cables will be mounted on the cable trays supplied by the Vendor. Feeders will be provided by BHEL but, Power cables required for Tapping from PDB's to systems will be in Vendor's scope.
23	Page 6 of 23, /CI 3.10,	Cable between PLC Hardwired consoles to PLC panel is in PLC vendor's scope of supply. Also cable (UTP-CAT 6) between PLC and DCS shall be in vendor's scope. BHEL shall provide the expected length, number of runs, and technical specification of connectivity to Metso DNA DCS system, for supply of correct interconnecting cables during detailed engineering. The scope of hardwired console is in scope of PLC vendor. The list of console items shall be furnished by IOCL/BHEL during detailed engineering.	a. Kindly help us with the cable length between Hardwired console and the safety system. b. Kindly help us with the cable length between DCS and PLC. c. Also kindly quantify the count of PBs, Lamps, switches. d. We assume that the IO count for these above hardwired console devices is already in the provided IO count	a . Cable Length is as indicated in the clause no.9 of page 3 of 23. b. During detailed Engineering - BHEL shall provide the expected cable (UTP-CAT6) length between DCS and PLCs. c. Refer the doc no. CE/415/BoP/0930/05,Rev.0 (Annexure 5 - Input Output Count). d. Refer the doc no. CE/415/BoP/0930/05,Rev.0 (Annexure 5 - Input Output Count).
24	Page 11 of 23, /CI 10.0,	Line monitored cards with auto testing feature shall also be provided for all I/Os.	In case of relays line monitoring shall only be provided up to relay coil.	Yes, Vendor's comment is correct.

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25	Page 11 of 23, /CI 11.5,	PLC Spare Philosophy: System Spares Bus Capacity 40% Installed Spares I/O Level(MODULE Wise) 20% Marshalling 20% Spare Space I/O Level 10% I/O interface hardware 20%	Kindly elaborate on the requirement.	PLC Spare Philosophy : 1. System Bus shall be loaded max. up to 60% of the Capacity, so that 40% remains spare. 2. Signal allocations to the modules shall be max. up to 80% of the channel Capacity, so that 20% channels remain spare. 3. Marshalling components - 20% of the total used quantity, shall be provided as spare. 4. In the Rack, 10% slots of its I/O Mounting - slots Capacity to be provided as spare. 5. I/O interface hardware devices / modules shall be provided 20% as spare.
26	Page 17 of 23, /CI 13a,	Warranty shall be 36 MONTHS FROM THE MECHANICAL COMPLETION DATE (Panel erection, cabling up to panel before energising) OR 15 MONTHS FROM THE DATE OF TAKING OVER BY OWNER (IOCL) WHICHEVER IS EARLIER.	We recommend BHEL to accept warranty of twelve (12) months from the date of initial installation or eighteen (18) months from the date of shipment by Seller, whichever period expires first	As per Clause - 5, Page - 3 of 23, No Deviations are permissible. Any deviations proposed by the bidder, shall be considered withdrawn, without claiming any commercial implications.
27	Page 20 of 23, /CI 14.7,	Vendor shall consider 50% software modifications & 25 % wiring modifications at site and other related changes, including changes in the related drawings and documents (after code-1 approval) without any cost implication.	The same shall have cost implications.	As per Clause - 5, Page - 3 of 23, No Deviations are permissible. Any deviations proposed by the bidder, shall be considered withdrawn, without claiming any commercial implications.

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28	not mentioned	CE/415/BoP/0930/00 - Technical specification for Programmable Logic controllers (PLC) CE/415/BoP/0930/01 - PART – I GENERAL SPECIFICATION FOR DCS & PLC SYSTEM	We assume that doc CE/415/BoP/0930/00 will supersede doc CE/415/BoP/0930/01 in case of any conflict in the specifications.	If, there is any conflict in the specifications of the mentioned docs. CE/415/BoP/0930/00 & CE/415/BoP/0930/01. Kindly, specify to get it resolved during PRE- BID QUERY activity.
Document no.: CE/415/BoP/0930/02				
29	Page 6 of 6,	System power Supplies VENDOR TO PROVIDE TUV APPROVED SYSTEM POWER SUPPLIES.	Kindly elaborate on the requirement.	SYSTEM POWER SUPPLY mounted in System Cabinets shall have TUV Certifications.
Document no.: CE/415/BoP/0930/04				
30	Page 6 of 7, /CI 8.0,	All system panels and marshalling panels will confirm to IP32.	As the system shall be placed in an controlled control room environment we recommend BHEL to accept IP21 cabinets.	As per Clause - 5, Page - 3 of 23, No Deviations are permissible. Any deviations proposed by the bidder, shall be considered withdrawn, without claiming any commercial implications.
31	Page 6 of 7, /CI 2.0,	Panel Hardware shall be of stainless steel make.	As the system shall be placed in an controlled control room environment we recommend BHEL to CRCA Cabinets.	Cabinets shall be CRCA, but Panel Hardwares shall be of stainless steel make.
Document no.: CE/415/BoP/0930/05				
32	not mentioned	Non-IS signals	We assume that all the I/Os are Non-IS.	Refer the doc no. CE/415/BoP/0930/05,Rev.0 (Annexure 5 - Input Output Count).
Document no.: CE/415/BoP/0930/00				

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33	not mentioned	General	PLC approved vendor list not mentioned in the RFQ	PLC approved vendor list not mentioned in the RFQ, since it is an Open tender to all eligible PLC Manufacturers, who posses qualification criteria as per our tender specs./conditions
34	not mentioned	General	Bidding procedure whether it is RA or normal bid submission.	As clearly indicated in our tender terms & conditions, all eligible bidders / vendors will have to submit bids in two parts i.e. a) Techno-commercial bid as Part - I and b) Price bid as Part - II. only. However please note that BHEL shall resort to RA for order finalisation.