



**INDRADHANUSH GAS GRID LIMITED**  
(Joint Venture of IOCL, ONGC, GAIL, OIL and NRL)  
**GUWAHATI, ASSAM**

**REPLY TO PRE BID QUERIES**

**FOR**

**SCADA & APPS SYSTEM FOR PIPELINE SECTIONS  
(1,2,3,4,5,6,7,8,9,12,13&14) UNDER NORTH EAST GAS GRID  
PIPELINE PROJCT OF M/s IGGL**

**OPEN DOMESTIC COMPETITIVE BIDDING**

**Tender no.: 05/51/23VC/IGGL/094**

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(Tenderwizrd helpdesk: 011-49424365)**



**PREPARED AND ISSUED BY**  
**MECON LIMITED**  
(A Govt. of India Undertaking)  
Delhi, India



**REPLY TO BIDDERS QUERIES**  
**SCADA & APPS SYSTEM FOR PIPELINE SECTIONS (1,2,3,4,5,6,7,8,9,12,13&14) UNDER NORTH EAST GAS GRID PIPELINE PROJ**  
**OF M/s IGGL**  
**Tender no. : 05/51/23VC/IGGL/094**



DATED : 23.03.2022

S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
1	1	265 of 269	Payment Terms	<p>Please note that with the current payment terms project cashflow will become negative and it will be difficult to sustain the project duration of 44 months. Hence, request you to kindly accept following payment terms:-</p> <ol style="list-style-type: none"> <li>10% against drawing approval</li> <li>80% against receipt of materials with 100% GST</li> <li>5% against Installation on pro-rata basis</li> <li>5% against commissioning on pro-rata basis.</li> </ol> <p>However, if installation &amp; commissioning is delayed for a period of more than 90 days from receipt of material at site for reasons not attributable to contractor, Payment against installation &amp; commissioning shall be released against BG of an equivalent amount within 90 days of dispatch of materials.</p> <p>Also, Kindly accept that payment terms will be applicable on each lot/phase of supply and all payments will be released within 30 days of invoice submission</p>	Tender Conditions Prevail.
2	1.4	265 of 269	Payment Terms	<p>We understand that this milestone payment shall be released on completion of each phase/lot of work. Kindly confirm.</p>	Tender Conditions Prevail.
3	Clause 27	58 of 269	Confidentiality	<p>Kindly accept that "Either Party shall protect the confidential information disclosed by the other party provided under this Contract".</p>	Tender Conditions Prevail.
4	Clause 52	71 of 269	Covid19	<p>Kindly accept Covid19 Clause: In India, according to the Office Memorandum on Force Majeure Clause ("FMC") issued by Ministry of Finance No.F. 18/4/2020-PPD dt. Feb 19, 2020 disruption of supply chains due to spread of corona virus in China or any other country will be covered in the Force Majeure Clause. Further in March, 2020 Government of India has declared Covid19 as a "notified disaster" and World Health Organization (WHO) has categorized Covid19 as a pandemic situation. The Parties [i.e. Purchaser and Seller] are aware of the current outbreak of the Covid19 worldwide which impacts or may impact the normal business and execution of this Contract. The Parties agree that contractor is entitled to any potential cost compensation, time extension, or other reasonably required adjustments in the Contract, if any consequences, whether directly or indirectly resulting out of, or in connection with the Covid19 outbreak, lead to delays in delivery of goods or provision of services, supplies or otherwise affect contractor's contractual obligations and/or duties.</p>	Tender Conditions Prevail.
5	Clause 27	183 of 269	Price reduction schedule of GCC	<p>Kindly accept Liquidated Damages in place of PRS: Any delay attributed to the contractor beyond agreed date of delivery will attract Liquidated Damage (LD), as a genuine pre-estimated losses and not as penalty, at 0.5% per week or part thereof on the value of the undelivered portion only, subject to maximum 5% on the total value of the undelivered portion. Liquidated Damages to be applicable on lot/phasewise order value. However, in case of any delay for the reason not attributable to the contractor or due to force majeure conditions, the provision of liquidated damages shall not apply. Liquidated Damages shall be the exclusive and the sole remedy available to the Purchaser under this Contract (or Order), tort or any other law applicable for the time being in force.</p>	Tender Conditions Prevail.
6	Clause 26.1	182 of 269	Force Majeure of GCC	<p>Kindly accept that "10 days" in the place of "72 hours"</p>	Tender Conditions Prevail.



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7	Clause 45	194 of 269	Contract Performace	Kindly accept that "In case contractor's performance is delayed due to any act of omission on the part of Purchaser or any third party engaged by Purchaser or the end customer then the contractor shall be given due extension of time for the completion of the scope, for a period not less than the duration of the resultant delay in the contractor's performance of the Contract. Purchaser shall grant appropriate cost compensation along with time extension to the contractor".	Tender Conditions Prevail.
8	Clause 32/ Clause 46 / Clause 77	186 / 194 /208 of 269	Termination of contract + Payment if the contract is terminated + Suspensions of Works of GCC	Kindly accept that "contractor shall be entitled to claim payments from Purchaser for all supplies and/or services completed including work in progress till the date of any termination /expiry /cancel /suspension of this Contract.contractor shall be entitled to claim applicable interest rate from Purchaser for any delayed payments to contractor under this Contract".	Tender Conditions Prevail.
9	IFB Notes/Sr. No. 2	9 of 269	Warranty & CAMC	Kindly note that for a project duration of 44 months, it is very difficult for any OEM especially IT & NW HW to provide warranty of further 24 months. Hence, request your acceptance of warranty/DLP as 18 months from supply or 24 months from commissioning, whichever is earlier. Also, warranty has to start separately for each lot/phase of supply rather than starting it post 44 months of order. CAMC will start post end of warranty of each lot/phase of supply.	Tender Conditions Prevail.
10	Clause 2.0/ Clause 81	246 / 210 of 269	Scope of Work & Scope of Supply-Site Service of SCC + Care of work of GCC	Kindly accept that scope of Work shall be as per mutually agreed BOQ between the Parties and any additional scope will entitle contractor additional costs from Purchaser the care and safety of the location and facilities will be in Purchaser scope under this Contract.	Not acceptable. Scope of work shall be as per the tender, complete in all respect. The tender is MR based and line items are only for billing purpose. Bidder to consider the tender requirements and quote accordingly in available line item. The system shall be supplied complete in all respect as per tender requirements. Rest Tender Conditions Prevail.
11	Clause 43	192 of 269	Patents and royalties of GCC	It is clarified that all intellectual property rights under this Contract is limited and restricted to the right to use by the Purchaser for the limited purpose of this Contract only. all and any pre-existing intellectual property rights of contractor are not transferred under this Contract and contractor shall be exclusive owner and title holder for contractor pre-existing intellectual property rights and similarly for any third party owned pre-existing intellectual property rights will be exclusively owned by such third party/ies.	Tender Conditions Prevail
12	Clause 85	212 of 269	Indemnity of GCC	Kindly accept that "Purchaser shall indemnify contractor from any third party claims if the reasons for the claim(s) are not solely attributable to contractor under this Contract".	Tender Conditions Prevail



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13			Raw Material, Commodities, Transportation & Other Critical Components	<p>Kindly accept <b>Raw Material, Commodities, Transportation and Other Critical Components</b></p> <p>The Parties hereby recognize the existence of a global severe shortage of electronic components (including, but not limited to, semiconductors), as well of market volatility in the availability and cost of other raw materials, commodities, transportation, and other critical components and/or elements, for an unpredictable period of time, which may impact normal business and the execution of the scope of delivery in a way and with a timing beyond contractor's control (hereinafter "Excusable Event"). Notwithstanding anything in the contract/terms and conditions/purchase order to the contrary, if after the date of contractor's proposal or order confirmation or during the term of the performance of the contract/purchase order/confirmed purchase order an Excusable Event occurs, so that the costs of the contractor's performance increase or contractor's performance obligations are materially adversely affected, temporarily or permanently prevented or delayed, contractor shall be relieved of any affected obligations and the Parties shall negotiate in good faith equitable adjustments of the contractor's obligations in terms of:</p> <p>a. reasonable extensions of the original date of delivery or completion;</p> <p>b. equitable adjustments in the price, to compensate contractor for any documented increase in components, raw materials, commodity and/or transportation costs;</p> <p>c. possible reductions of the contractually owed quantity of the goods to be delivered to the Customer, with a view to employing reasonable efforts to ensure that the contract/purchase order/confirmed purchase order can at least be filled in part.</p> <p>Agreed liquidated damages, any actual damages, penalties or other fines, otherwise payable by contractor shall not apply for delays directly or indirectly caused by the Excusable Event. Customer cannot invoke such a delay as a cause for termination/cancellation of the Contract/Order, unless otherwise agreed between the Parties. In the event of a prolonged Excusable Event, contractor retains the ability to terminate any affected agreement for convenience, by servicing notice to Customer to this effect.</p> <p>In case of termination/cancellation of the contract/purchase order/confirmed purchase order directly or indirectly caused by the Excusable Event, each Party waives any claim against the other Party either for direct damages and/or loss of profits and/or indirect and/or intermediate damages, penalties and/or liquidated damages. If any dispute or difference arises between the Parties, the Parties hereto shall endeavor to settle such dispute amicably. Any contract, order acceptance or order confirmation by contractor is entered into and made subject and conditioned to the above terms, which the Parties recognize as fundamental conditions of any such agreement within the Parties</p>	Tender Conditions Prevail
14	Clause 100	221 of 269	Statutory variation	Kindly accept Statutory variation: Any increase in duties, taxes/levy of new duties/taxes under existing or future laws of State/Central Government including GST & any cost implication on account of change in law shall be paid / reimbursed extra by the Purchaser to contractor which includes for the supply, services of both contractor & its vendor/sub-vendor directly to the end customer.	Tender Conditions Prevail
15	Clause 101	221 of 269	Insurance of GCC	Kindly accept that transit insurance will be in Purchaser scope. There are no insurances in contractor scope.	Tender Conditions Prevail
16			Price escalation	Kindly accept that The price as set forth in this Contract has been calculated based on the current prices for the component(s), part(s) and raw material(s) (the "Parts") required to manufacture the products. However, due to the volatility of the prices of the Parts, Seller may encounter significant and potentially unanticipated increases in Parts pricing. Seller agrees to employ its reasonable commercial efforts to maintain the Parts pricing used to determine the price of Products as set forth in this Contract]. However, in the event of an increase in Parts pricing, Seller shall notify Purchaser thereof, and Purchaser shall pay the relevant increased pricing.	Tender Conditions Prevail



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17	Clause 29/ Clause 30/ Clause 38/ Clause 40/ Clause 97/ Clause 102	184/185/191 /192/220/225 of 269	Failure by the contractor to comply with the provision of the contract+Contract remains liable to pay compensation if action take under clause 29+ Contractor's responsibility with the mechanical electrical, intercommunication system, airconditioning contractors and other agencies + Other agencies at site + Deductions from the contract price + Damage to Property or to any Person or any Third Party of GCC	It is clarified that any liability of the Contractor under this Contract shall be restricted to this Contract only and the recovery shall be limited only to the extent the reasons are solely attributable to the Contractor under this Contract.	Tender Conditions Prevail
18	Clause 45	68/269	Governing law and dispute resolution	Kindly accept that this Contract (or Order) shall be governed by and construed in accordance with the laws of India. Any dispute or difference arising out of or in connection with this Contract (or Order), which cannot be settled amicably within thirty (30) calendar days from the notification of such dispute by one Party to the other Party, shall be finally settled under the Arbitration and Conciliation Act, 1996 by sole arbitrator appointed in accordance with the said law. The place of arbitration shall be Bengaluru, India. The language of the arbitration shall be English. The final award shall be binding on the Parties.	Tender Conditions Prevail
19			Compliance with anti-corruption law	Kindly accept that "Parties shall adhere and fully comply with the anti-corruption laws. contractor shall strictly adhere with the contractor Code of Conduct"	Tender Conditions Prevail
20			Entire agreement	Kindly accept that this Contract constitutes the entire agreement between the Parties with respect to the subject matter of this Contract and supersedes all communications, negotiations and agreements (whether written or oral) of Parties with respect thereto made prior to the date of this Contract.	Tender Conditions Prevail
21	Clause 21.1	178 of 269	General Obligation of GCC+ Priority of documents of GCC	Kindly accept that all deviations mentioned in this document shall be integral part and parcel of the Contract and shall supersede and prevail over any other T&Cs of the Contract".	Tender Conditions Prevail
22	Notes/Sr. No. 7	10 of 367	Storage of Materials	We request M/s IGGL/Mecon to kindly provide space for storage in all sections of pipeline.	Bidder to hire space for storage in each state , complete as per the tender. Rest tender conditions prevail.
23	7.13	21 of 367	Co-ordination with Mechanical, civil & electrical contractors	We request M/s IGGL/Mecon to kindly take co-ordination in their scope.	Tender Conditions Prevail.
24	7.17	21 of 367	Changes/Modifications/ Additiona/Deletions	Please note that it is required to deploy manpower to do the works specified in these clauses. Hence, request you to kindly put limit on this which will enable us to do our costing accordingly.	Tender Conditions Prevail.
25	7.18	22 of 367	Interfacing with IED's	Please note that it is required to deploy manpower to do the works specified in these clauses. Hence, request you to kindly put limit on this which will enable us to do our costing accordingly.	Tender Conditions Prevail.



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26	7.18 & 8.84	22 & 44 of 367	Interfacing with IED's & 3rd party system	Kindly note that any work to be done in 3rd party system for interfacing will not be in scope of contractor. Kindly accept.	Tender Conditions Prevail.
27	Sr. No. 15	26 of 367	Any other Software	Kindly accept that software as mentioned clearly in Tender & MR will only be supplied. Additional software will be provided post mutually agreed change order.	The tender is MR based and line items are only for billing purpose. Bidder to consider the tender requirements and quote accordingly in available line item. The software mentioned in tender are minimum and tentative. The system shall be supplied complete in all respect as per tender requirements. Rest Tender Conditions Prevail.
28	Sr. No. 6	27 of 367	Any other Software	Kindly accept that software as mentioned clearly in Tender & MR will only be supplied. Additional software will be provided post mutually agreed change order.	The tender is MR based and line items are only for billing purpose. Bidder to consider the tender requirements and quote accordingly in available line item. The software mentioned in tender are minimum and tentative. The system shall be supplied complete in all respect as per tender requirements. Rest Tender Conditions Prevail.
29	8.12	27 of 367	SIM Card	We request M/s IGGL/Mecon to kindly consider SIM card in their scope.	Kindly note that SIM card shall be provided by the bidder as per the tender. Rest Tender Conditions Prevail.
30			Static IP in MMS, BMS-1 & BMS-2	We understand that static IP in control rooms will be provided by M/s IGGL. Kindly confirm.	Static IP has to be taken by bidder as per the requirement. All the works and services required for static IP is included in scope of the bidder. Rest Tender Conditions Prevail
31	8.51	32 of 367	The software shall be upgradable without any changes in hardware.	Please note that only updates of installed version will be provided. Kindly accept.	Tender Conditions Prevail.
32	7.5 & 8.88	20& 45 of 367	SCADA Servers at MMS, BMS-1 & BMS-2	Kindly note that in the philosophy asked in Tender there is limitation of maximum 4 Servers. Hence, request you to kindly change the number of Servers from 6 to 4(2 at MMS and 1 each at BMS-1 & BMS-2).	Redundant SCADA Servers shall be provided at MMS location and single SCADA server shall be provided each at BMS-1 and BMS-2 locations. Rest Tender Conditions Prevail.
33	8.82	43 of 367	Storage	We request M/s IGGL/Mecon to kindly provide space for storage in all sections of pipeline.	Bidder to hire space for storage in each state , complete as per the tender. Rest tender conditions prevail.



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34	8.88 (z)	48 of 367	Any hardware required for communication between MMS/BMS/EMS and remote sites / IEDs (e.g. switch, serial to TCP/IP converter, TCP/IP to serial converter etc.) shall be provided by SCADA Vendor if required at site. Also, the cables and connectors to connect the terminal server port with modem/DCU/serial to TCP/IP converter will be provided by SCADA vendor.	We request M/s IOCL/Mecon to kindly provide details of each of the IED's to be connected with SCADA & RTU, ports available & communication protocol for consideration for any converter, switch etc. Please note that in absence of these details it will not be possible for bidder to identify & quantify these additional hardware & RTUs shall be supplied as per specification of RTU provided in Tender.	Details of IED shall be provided to successful bidder during detail engineering. The serial ports shall be provided as per the IO list provided in the tender. Rest Tender Conditions Prevail.
35	8.89	50 of 367	Battery Limit with other Contractors	We understand that cables has to be supplied as per details mentioned in this clause. Kindly confirm.	Bidder's understanding is correct. Rest Tender Conditions Prevail.
36	8.91 (iii)	53 of 367	Serial & Ethernet ports	Kindly accept the Ethernet ports for communication with Main Master Station, Emergency Master Station on same CPU cum communication card.	Ethernet ports on available on CPU can be used for communication with SCADA servers only. They cannot be used for communication with IEDs. Rest Tender conditions Prevail.
37	8.92 (iv)	53 of 367	AO Card & Serial card	Kindly accept no. of ports on AO & Serial card as per OEM standard design.	The number of ports on AO card and serial card shall be provided as per the OEM recommendation. However, total number of ports of each type (DI, DO, AI, AO, serial) at each station shall be provided as per the tender. Rest Tender Conditions Prevail.
38	9.5	59 of 367	Earthing	We understand that earthing pits are in scope of M/S IGGL/Mecon. Kindly confirm.	The earth pit shall be constructed by other contractor. However, Earthing cable from earth pit to bidder supplied equipment is included in scope of the bidder and it shall be supplied and laid by the bidder. This cable shall be FRLS Armoured. Rest Tender Conditions Prevail.
39	S. No. 1	108 of 367	Router/USB port – 01 No. for external storage required.	Bidder proposed routers with sufficient internal storage. However the USB port of the router cannot be used for External storage. Please accept.	Tender Conditions Prevail.
40	S. No. 6	113 of 367	Time lapse : Maximum 10 Seconds for connecting to SCADA system in case of failure of OFC link.	Please note that the connectivity Via GPRS modem to SCADA depends of the speed of ISP and not the modem hardware. So, bidder request the this clause to be deleted.	Tender Conditions Prevail.



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41	S. No. 11	113 of 367	Routing	Please note that Modem shall be capable of static routing only.	MODEM shall be provided as per the GPRS network requirements in-line with tender specifications. Rest Tender Conditions Prevail.
42	Notes 1	139-141 of 367	25% Spare	We understand that 25% spare is applicable only on IO ports and not on Serial ports. Kindly confirm.	25% spare is applicable on IO ports. For serial ports, the spare port requirement is mentioned separately. Rest Tender Conditions Prevail.
43		139-141 of 367	Serial/Ethernet Ports	We understand that port count mentioned here is for Serial ports only. Kindly confirm.	Tender Conditions Prevail.
44		139-141 of 367	IO Count	Please note that IO count is not provided for all the RTU locations mentioned in MR. Hence, request you to kindly provide IO list for all RTU locations.	IO list has been provided for all RTUs. For spare RTUs of each type(SV, RT/DT, IP), the IOs shall be provided as per the maximum equipped capacity RTU of each type (SV, RT/DT, IP). Rest Tender Conditions Prevail.
45	10	173 of 367	Line Switching Unit	Please note that as per our understanding line switching units are not required as we will already be providing switches. Kindly clarify.	Ethernet switches shall be provided instead of line switching unit. Ethernet switches shall be as per tender. Rest Tender Conditions Prevail.
46	19	180 of 367	Application Software-Project specific application software shall be provided by other contractor for the entire pipeline.	Kindly specify whether supply of APPS Software is in scope of this Tender or not.	Supply of complete APPS software as per the tender requirements is included in scope of the bidder. Rest Tender Conditions Prevail.
47	20	180 of 367	Telecommunication System	We understand that scope of telecommunication system is part of separate tender. Kindly confirm.	Bidder's understanding is correct. Rest Tender Conditions Prevail.
48		63 of 367	Spares	Please note that for IT & NW HW 5-7 years spares support can be provided subject of placement of Warranty/CAMC order.	Tender Conditions Prevail.
49				Kindly extend bid due date by min. 4 weeks from date of pre-bid replies.	Tender Conditions Prevail.
50	VOLUME – II OF II	06 of 250	T.S.3 SOFTWARE	We understand that SCADA tag licence shall be considered based on the number of total number of tags requirement at all RTU location, kindly confirm.	The tag license shall be provided as per the tender. Rest tender conditions Prevail.





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51	VOLUME – II OF II	21 of 250	8.12The SIM card for the MODEM shall be provided by the bidder. The SIM card shall be operated by the bidder till the end of warranty period and then handed over to IGGL	Please clarify on the responsibility for SIM procurement and maintenance during commissioning period & AMC period.	The SIM shall be provided by bidder as per the tender and maintained by bidder till warranty. It shall be handed over to IGGL after completion of warranty period. Rest Tender Conditions Prevail.
52	VOLUME – II OF II	21 of 250	BRIEF SCOPE OF SUPPLY & WORKS FOR SCADA SYSTEM: 7.16.Surge Protection Devices to be provided extensively for AC/DC at input and output. Surge Protection System shall also be provided at the earth circuits and field communication links.	Need confirmation on quantity of the Surge protector per RTU and other system and its type.	Tender Conditions Prevail.
53	VOLUME – II OF II	42 of 250	8.79 RTU test Jig Unit	Test jig will be formed by providing RTU covering the following: 1. CPU Card - 1 No. 2. Communication Card - 1 No. 3. Power Supply Card - 1 No. 4. DI/DO/AI/AO Card - 1 No. 5. Backplane & Accessories for the above cards.Please confirm.	Tender Conditions Prevail.
54	VOLUME – II OF II	45 of 250	8.88 GENERAL CONTROL AND FAILOVER PHILOSOPHY:The SCADA system communicates to individually IP addressed RTU /Device on dedicated OFC network. Backup communication link between MMS/BMS will be achieved by independent leased link provided by the independent service provider (under IGGL's scope). Necessary WAN router and terminal server as required for interfacing is included the bidder's scope.	WAN routers are not part of BOQ hence we presume that it is not included in the scope of supply, kindly clarify.	The tender is MR based and line items are only for billing purpose. All router, switches, etc as required for complete system as per tender requirements have to be provided by bidder. Bidder to consider the complete tender requirements and quote accordingly in available line item.Rest Tender Conditions Prevail.
55	VOLUME – II OF II	67 of 250	iv. Protocol analyser:	Please provide detailed specification for Protocol Analyzer and Approved vendors list for the same.	It shall be as per the specification provided in tender. Rest Tender Conditions Prevail.
56	VOLUME – II OF II	125 of 250	TECHNICAL SPECIFICATION FOR RTU PANEL & ACCESSORIES c) Panel Dimensions : Height – 2115mm (including 100mm base channel and 15 mm anti-vibration pad) Width – 800 mm , Depth – 800 mm	Please accept free standing panels with Depth=400mm, Height – 2115mm & Width – 800 mm. at locations where number of IO's are less	Tender Conditions Prevail.
57	VOLUME – II OF II	126 of 250	PANEL CONSTRUCTION,: D-Life of panel :20 Years	Please note that any support required for the panel can be extended till 10 years through vendor.	Tender Conditions Prevail.



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58	VOLUME – II OF II	145 of 250	4.0 RTU SUBSYSTEMS	We understand that requirement of RTU is with Non-Redundant CPU, Non-Redundant Power supply, Non-Redundant Communication and NON-Redundant IO modules. Please confirm.	Bidder's understanding is correct. Rest Tender Conditions Prevail.
59	VOLUME – II OF II	145 of 250	1.0 GENERALThe I/O cards shall not be combined for the functionalities i.e. each card shall have dedicated modules for Analog input, Analog output, digital Input, Digital output etc.	Kindly accept In-built IO's for RTU. However individual IO module shall also be considered after utilization of in-built IO's based on the requirement of count of hardwired IO's at each location.	Not acceptable.Modular type RTU with separate IO card of each type shall be provided. Rest Tender conditions Prevail.
60	VOLUME – II OF II	161 of 250	1.3.1 OPERATING SYSTEM REQUIREMENT OF SCADA SYSTEM;(i) The SCADA system shall be built around Microsoft Windows / UNIX operating systems as per following	Please confirm whether Unix / Linux is acceptable make of OS.	Unix is acceptable, however, linux is not acceptable. Rest Tender Conditions prevail.
61	VOLUME - I	04 of 269	Section I -IFB Completion Schedule 1 - a,b,c,d,e,f 2 - a,b,c,d,e,f,g 3 - PWMC	We request client to accept start of warranty of each phase / group / call out order separately. After start of warranty, we request that the AMC for corresponding phase / group / call out order may be started.	Tender Conditions Prevail.
62	VOLUME - I	08&09 of 269	Note 1,2,3,4	The present warranty is defied as 24 months from date of acceptance of system, which can 48 months. This is too long for acceptance of warranty. We request client to cap the warranty from delivery so that the total warranty does not exceed 24 months from supply for individual phase / group / call out.	Tender Conditions Prevail.
63			Bid Due date	Due to end of financial year, we are having difficulty in getting quotes from our sub vendors. We request client to extend the bid due dates by 2 weeks.	Tender Conditions Prevail.
64	VOLUME – II OF II	8.14.4	Test run	At clause 8.14.4 of APPS specification test run was mentioned as 7 days however the same was mentioned as 15 days at clause 7.0 of APPS specification, please confirm what is the duration of test run?	Test run (Trial run) for complete integrated system shall be for 15 days after successful completion of System Availability test. Rest Tender Conditions Prevail.
65	VOLUME – II OF II	8.11	Availability test	At clause 8.11 of APPS specification, it was mentioned that 30-day Availability Test is required. Please confirm after SAT only test run is required or both test run, and Availability Test are required? If required what are the durations required for each?	Both Availability test and Test run are required and shall be carried out by bidder. Availability test shall be for 30 days after successful completion of SAT and test run shall be for 15 days after successful completion of availability test. Rest Tender Conditions Prevail.



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S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
66	VOLUME – II OF II	3.14.6	APPS servers	At clause 3.4.16 of APPS specification, it was mentioned that at MCS 3 servers will be provided for APPS one each for RTM, PM & Trainer, please confirm how many servers are provided at BMC1 & BMC2 for APPS? Are 3 more of each required at BMC1 and BMC2?	Kindly note that 2 servers shall be provided one for RTM and one for PM & Trainer combined. These 2 servers shall be provided at each MMS, BMS-1 and BMS-2 locations. Rest Tender Conditions Prevail.
67	VOLUME – II OF II		APPS trainer	At several clauses it was mentioned that the APPS trainer system (including pipeline simulator) is a requirement however we didn't find any detailed trainer system requirements in the APPS specification, please confirm whether APPS trainer system is a requirement or not?	APPS trainer system is required each at MMS, BMS-1 and BMS-2 locations. Rest Tender conditions prevail.
68	VOLUME – II OF II	9.22	PWMC	At clause 9.22 of Centralized SCADA system specification, it was mentioned that POST WARRANTY MAINTENANCE CONTRACT(PWMC) is for 5 year after completion of 24 months warranty whereas at clause 12.0 of APPS specification it was mentioned that for APPS 3 years AMC need to be provided after 24 months warranty, please confirm AMC period required after 24 months warranty period is for 3 year or 5 years?	PWMC shall be 5 years comprehensive after completion of main warranty as per the tender. The PO for PWMC shall be issued separately by IGGL as per their requirement. Rest Tender Conditions prevail.
69	VOLUME – II OF II	2.5	Optimizer	From the data submitted it seems on IGGL gas grid there is only one compressor station and that to one compressor in that station (from P&ID), for this one compressor do you really need Compressor optimizer module? Generally when there are more than one compressor station on the pipeline with each compressor station having multiple compressor units then we can apply compressor optimization to select unit combinations. Please confirm.	DT, Guwahati (sec-1) is the compressor station and 3 nos. of compressors are envisaged at compressor station. Accordingly, the optimizer module shall be provided. Rest tender conditions prevail.
70	Volume-II of II	8.14.4/7.0	Test Run/Quality Assurance & Acceptance Pr	At clause 8.14.4 of APPS specification test run was mentioned as 7 days however the same was mentioned as 15 days at clause 7.0 of APPS specification, please confirm what is the duration of test run?	Test run (Trial run) for complete integrated system shall be for 15 days after successful completion of System Availability test. Rest Tender Conditions Prevail.
71	Volume-II of II	8.11	Testing & Inspection	At clause 8.11 of APPS specification, it was mentioned that 30-day Availability Test is required. Please confirm after SAT only test run is required or both test run, and Availability Test are required? If required what are the durations required for each?	Both Availability test and Test run are required and shall be carried out by bidder. Availability test shall be for 30 days after successful completion of SAT and test run shall be for 15 days after successful completion of availability test. Rest Tender Conditions Prevail.
72	Volume-II of II	3.4.16	APPS System requirement	At clause 3.4.16 of APPS specification, it was mentioned that at MCS 3 servers will be provided for APPS one each for RTM, PM & Trainer, please confirm how many servers are provided at BMS1 & BMS2 for APPS? another 3 each at BMS1 and BMS2?	Kindly note that 2 servers shall be provided one for RTM and one for PM & Trainer combined. These 2 servers shall be provided at each MMS, BMS-1 and BMS-2 locations. Rest Tender Conditions Prevail.



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73	Volume-II of II	3.2	Envisaged APPS System Architecture	At several clauses it was mentioned that the APPS trainer system (including pipeline simulator) is a requirement however we didn't find any detailed trainer system requirements in the APPS specification, please confirm whether APPS trainer system is a requirement or not?	APPS trainer system is required each at MMS, BMS-1 and BMS-2 locations. Rest Tender conditions prevail.
74	Volume-II of II	9.22/12.0	Post Warranty Maintenance Contract(PWMC)	At clause 9.22 of Centralized SCADA system specification, it was mentioned that POST WARRANTY MAINTENANCE CONTRACT(PWMC) is for 5 year after completion of 24 months warranty whereas at clause 12.0 of APPS specification it was mentioned that for APPS 3 years AMC need to be provided after 24 months warranty, please confirm AMC period required after 24 months warranty period is for 3 year or 5 years?	PWMC shall be 5 years comprehensive after completion of main warranty as per the tender. The PO for PWMC shall be issued separately by IGGL as per their requirement. Rest Tender Conditions prevail.
75	Volume -II of II	2.5/3.4.16	Service & APPS System requirement	From the data submitted it seems on IGGL gas grid there is only one compressor station and that to one compressor in that station (from P&ID), for this one compressor do you really need Compressor optimizer module? Generally when there are more than one compressor station on the pipeline with each compressor station having multiple compressor units then we can apply compressor optimization to select unit combinations. Please confirm.	DT, Guwahati (sec-1) is the compressor station and 3 nos. of compressors are envisaged at compressor station. Accordingly, the optimizer module shall be provided. Rest tender conditions prevail.
76	8.70.2	8.70.2	The AI/ ML system shall take the required data from SCADA system, station PLC system or any other system as required. All hardware and software required for data gathering is included in scope of the bidder. In case of failure of data communication, the system shall generate suitable alarms to alert the operator about the same.	Kindly confirm the following -From the SCADA system, process data needs to be integrated via OPC DA / UA. - For PLC's the relevant data from the PLC needs to be made available in the SCADA OPC UA / DA server for historization. - For any other 3rd party systems to be integrated MECON / IGGL to clearly list out the systems and the mode of integration to be considered as this will have an impact on price & implementation efforts. Any licenses needed on the 3rd party system for integration / data transfer needs to be provide by Mecon / IGGL.	All the data shall be taken to SCADA through RTU at respective location. The data exchange between SCADA and AI/ML server shall be through OPC. The 3rd Party system shall be integrated to RTU and same shall be integrated either over hard wire link or MODBUS link as per the I/O list provided in the tender. Any license needed on 3rd party system for integration/ data transfer is not included in scope of bidder. However, any license needed at the end of bidder supplied system or integration/ data transfer is included in scoep of the bidder. Rest Tender Conditions Prevail .
77	8.70.3	8.70.3	The AI/ ML system shall continuously utilize the data from SCADA historian to re-calibrate the system, minimize the errors , decrease uncertainty, improve the performance and system output.	Kindly confirm if the feature being indicated above refers to automatic recalibration of the predictive maintenance models.	automatic recalibration of the system shall be done. The model shall be finalized during detail engineering meeting the tender requirements. Rest Tender Conditions Prevail.



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S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
78	8.70.4	8.70.4	The AI/ ML based system shall use the historical data to facilitate the operation team for quick decision making.	Is this a greenfield or brownfield plant ? If greenfield, what is modality & timeline for implementing AI/ML solution as minimum 6 months of stable operating data is required for building the predictive maintenance and forecasting models. Please note the accuracy of the model will increase over time as the system learns continuously.	The project is a greenfield project. It is noted that the accuracy of the model shall increase over time. Minimum 6 months of operating data shall be considered for commissioning of AI/ ML system. The commissioning of AI/ML system shall be completed within 44 months of FOA. If it is delayed beyond 44 months due to factors not attributable to the bidder, bidder shall request for suitable time extension for commissioning of AI/ ML system. Rest Tender Conditions Prevail.
79	8.70.8	8.70.8	The AI/ ML system shall be integrated with SCADA and all critical alarms of AI/ ML system shall be communicated to SCADA. The list of such alarms shall be finalized during detail engineering.	What is the preferred mode of integration with the SCADA system – Webservices / OPC etc. ?	The data transfer between SCADA and AI/ML system shall be through OPC as supplied by the bidder. Rest Tender Conditions Prevail.
80	8.70.17	8.70.17	The AI/ ML system shall have thermodynamic model for the system.	This requirement contradicts the need for an AI/ML system which is purely data based and not based on thermodynamics. Kindly confirm the approach as the solutions are different for AI/ML models and Simulation based Thermodynamic models. Please note the use of AI/ML in thermodynamic based simulation models is in a very nascent stage and is used for automatic model recalibration of the models but not for the application of AI/ML to identify / predict failures / anomalies.	Both data based analytics and simulation based thermodynamic models shall be provided. Accordingly the softwares shall be provided and complete system shall form part of AI/ ML based system. Rest Tender Conditions Prevail.
81	8.70.18	8.70.18	Bidder shall propose the AI/ ML system as per their design considering the best practices and latest trends followed in hydrocarbon industry. However, the system shall be customized and provided as finalized during detail engineering. The requirements finalized during detail engineering shall be implemented by the bidder without any cost implication to IGGL/ MECON.	Please note that we will need to freeze the minimum requirements to be addressed by the AI/ML solution Any additional scope will incur additional implementation costs and extension of delivery timelines.	The minimum requirements of the system is mentioned in the tender with complete scope as per the tender. Rest Tender Conditions prevail.



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82	8.70.21	8.70.21	<p>Following Equipment shall be monitored / controlled through AI/ ML based solution –</p> <p>1. All the compressors with complete associated system – There are 3 compressors along with associated systems such as coolant system, VFD, Vibration Monitoring system, Temperature Monitoring, flow meters, dedicated PLC etc.</p> <p>2. Ultrasonic Flow Meters – All the Ultrasonic flow meters of the complete pipeline and compressor station to be considered for diagnostic purpose.</p> <p>3. Gas Chromatograph – All the Gas chromatographs of the complete pipeline and compressor station to be considered for diagnostic purpose.</p> <p align="center">&amp;</p> <p>4. H2S and Moisture Analyzers – All the H2S and Moisture Analyzers of the complete pipeline and compressor station to be considered for diagnostic purpose</p>	<p>1) What is the VMS system finalized ? The VMS data needs to be available at the SCADA OPC Server. Any licenses for integration and accessing the VMS data needs to be provided by MECON / IGGL. Please note the AI/ML system will only need process data and the vibration amplitude data to deploy Predictive Models. Any FFT / Spectrum Analysis is proprietary of the VMS system OEM and cannot be carried out in the AI/ML System.</p> <p>2) Kindly confirm that the flow data is to be included as part of the Predictive Maintenance model and it will not need prediction of failure on Ultrasonic Flow meter as this can be provided only by the UFM OEM.</p> <p>3) &amp; 4) : We understand that the sample analysis data needs to be used in the predictive maintenance model. The GC &amp; Analyzer data needs to be integrated with the SCADA and made available in the SCADA OPC Server. Kindly confirm.</p>	<p>1) The details of VMS system shall be provided to successful bidder during detail engineering. The VMS system shall be interfaced with compressor PLC and compressor PLC shall be interfaced with bidder supplied RTU.</p> <p>2) The diagnostic data from respective flow meter shall also be available. That data also to be taken to AI/ML system and diagnostic and prediction of Ultrasonic Flow meter to be developed.</p> <p>3) &amp; 4) The GC &amp; Analyzer will be integrated with the SCADA and data will be available in SCADA. Bidder shall take data from SCADA to AI/ML system.</p> <p align="center">Rest Tender Conditions Prevail.</p>
83	8.70.22	8.70.22	All the modules shall be factory configured package with facility of site customization and fine tuning at site based on monitored machine historical & engineering data.	We understand the solution should be a COTS system and not open source solution. Kindly confirm.	The system shall be provided as per the bidder's design. Rest Tender Conditions Prevail.
84	8.70.24	8.70.24	The monitoring system shall utilize compressor PLC connected via a LAN to process control and other equipment monitoring systems	Kindly refer our query for point 8.70.2	<p>All the data shall be taken to SCADA through RTU at respective location. The data exchange between SCADA and AI/ML server shall be through OPC.</p> <p>The 3rd Party system shall be integrated to RTU and same shall be integrated either over hard wire link or MODBUS link as per the I/O list provided in the tender. Any license needed on 3rd party system for integration/ data transfer is not included in scope of bidder. However, any license needed at the end of bidder supplied system or integration/ data transfer is included in scope of the bidder. Rest Tender Conditions Prevail .</p>



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85	8.70.28	8.70.28	The system shall automatically capture process and equipment conditions that represent normal operation and calculate alert limits for abnormal conditions based on this baseline data.	If this is a greenfield pipeline, how & when will the baseline data be provided ? Please note that the AI/ML solution will identify anomalies / deviations based on the asset faults / signature and not rule based / limit based as this will defeat the purpose of a Predictive Maintenance solution and lead to increase in false positives & reactive maintenance. Kindly modify the specification as this is contradicting the AI/ML Predictive Maintenance solution.	Kindly note that Predictive Maintenance is just one of the modules of AI/ ML system. Alert limits shall be created in the system based on the system simulation and calculation to generate alarms and notifications for abnormal operation. Rest Tender Conditions Prevail.
86	8.70.30	8.70.30	Baseline, signature and configuration data sets shall be available to be stored, and retrieved to the online monitoring system in order to accommodate different operating or seasonal modes. The system shall keep and utilize the historical data of atleast 7 years to optimize the outputs. Separate hard disk and server as required to keep the historical data shall be provided by the bidder.	How & when will the AI/ML solution be deployed in case of a greenfield asset as historical data will be needed for building the models ?	Minimum 6 months of operating data shall be considered for commissioning of AI/ ML system. The commissioning of AI/ML system shall be completed within 44 months of FOA. If it is delayed beyond 44 months due to factors not attributable to the bidder, bidder shall request for suitable time extension for commissioning of AI/ ML system. Rest Tender Conditions Prevail.
87	8.70.37	8.70.37	For rotating equipment, the vibration measurements are relatively infrequent and are inherently noisy signals. Therefore, Statistical Process Control (SPC) techniques shall be applied to these vibration signals to detect when a change in the measurement is statistically significant. Vibration increasing alerts shall be triggered when the SPC algorithms determine that the vibration shows a substantially increasing vibration trend even though the maximum has not been reached.	This is contradicting the AI/ML solution requirement. The SPC techniques will be applicable on the data stored in the VMS system which is proprietary of the OEM of the VMS. This cannot be done on the AI/ML solution.	The VMS system shall be interfaced with compressor PLC and compressor PLC shall be interfaced with bidder supplied RTU. All data of VMS system shall be made available to SCADA. Accordingly, SPC techniques shall be applied. If the required data from VMS is not made available to SCADA, in such case SPC shall not be implemented. Rest Tender Conditions Prevail.
88	8.70.54	8.70.54	Use Thermodynamic models to detect change in molecular weight , phase fraction / risk of condensations.	As indicated in the query against clause 8.70.17, AI/ML models are data based and not Thermodynamic based. Kindly clarify the exact requirement.	Both data based analytics and simulation based thermodynamic models shall be provided. Accordingly the softwares shall be provided and complete system shall form part of AI/ ML based system. Rest Tender Conditions Prevail.



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89	8.70.56	8.70.56	Predict normal performance for given operating conditions and gases being compressor using Honeywell unique normalized performance map evaluator.	As indicated above, kindly clarify if the requirement is data based AI/ML solution or Simulation based thermodynamic model for process calculations. The requirement above refers to the typical simulation model based process / asset performance calculations and comparison between design / normal vs actual performance and in no way related to AI/ML based predictive maintenance / Asset monitoring.	Both data based analytics and simulation based thermodynamic models shall be provided. Accordingly the softwares shall be provided and complete system shall form part of AI/ ML based system. Rest Tender Conditions Prevail.
90	7.1 & T.S.1	20/ 250 & 5,6/ 250	To ensure effective and reliable Control, Management and Supervision of pipeline, the pipeline is envisaged to be monitored and controlled from centralized SCADA system's proposed Main Master Station (MMS), at Numaligarh, Back-up Master Station (BMS) -1 at Guwahati and Back-up Master Station (EMS) -2 at Sihar. & System Design, Engineering & Supply of SCADA System at Main Master Station (MMS) consisting all Hardware, fully wired Server Rack, necessary accessories, furniture etc as defined in Scope of work in the Job specification No MEC/05/E5/T /23VC/PJS-094, Technical Specifications & other documents provided in the tender. ( Tentatively at Guwahati)	One Clause states the MMS at Numaligarh and other clause states MMS at Guwahati. Please confirm the locations of MMS, BMS-1 & BMS-2	MMS is envisaged at Numaligarh, while BMS-1 is envisaged at Guwahati and BMS-2 is envisaged at Sihar. However, the locations of MMS, BMS-1 and BMS-2 are tentative and shall be finalised during detail engineering.
91	7.5	20/ 250	SCADA System shall be open architecture design, to monitor & control the process equipment and parameters of pipeline. The architecture shall mainly consists of following - i. Redundant Main Master station (MMS) at Numaligarh ii. Redundant Back-up Master Station -1 (BMS-1) at Guwahati iii. Redundant Back-up Master station -2 (BMS-2) at Sihar	We understand that "redundant" i.e 2 nos. stations/ machines/ servers are envisaged at MMS, BMS-1 & BMS-2 each. Please confirm	Redundant stands for 2 nos. Redundant SCADA Servers shall be provided at MMS location and single SCADA server shall be provided each at BMS-1 and BMS-2 locations. Rest Tender Conditions Prevail.





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92	7.11	21/ 250	The SCADA system communicates to the individual IP addressed RTU through any of the following two communication channels – <input type="checkbox"/> Over Dedicated Telecom channel of IGGL with OFC Backbone <input type="checkbox"/> On third party GPRS communication network through dual SIM-MODEM. & All RTUs shall communicate with SCADA system over OFC/ (GPRS/ GSM) MODEM. If OFC connectivity is available, it shall communicate through OFC , else it shall communicate through GRPS/ GSM MODEM. The SIM card for the MODEM shall be provided by the bidder. The SIM card shall be operated by the bidder till the end of warranty period and then handed over to IGGL for	Based on TRAI regulation, SIM Card shall be provided by Customer as the same needs to be purchased in Customers'/ End users' name. We request the customer to consider the same. Further the charges for the same shall also be by the IGGL.	SIM card shall be provided by the bidder and all charges for same as per the tender requirements is included in scope of the bidder. Rest Tender Conditions Prevail.
93	7.13	21/ 250	It shall be the responsibility of the SCADA vendor for coordination with mechanical, civil, electrical and other contractors for all the works related to SCADA.	We understand that incase of any liasoning required while interaction with other contractors. The same shall be by IGGL.	All liasoning with other contractors is included in scope of the bidder. Rest Tender Conditions Prevail.
94	7.17	21/ 250	Any number of changes/ modification/ addition/ deletion in Graphics, Logics, Reports etc. as required by IGGL/ MECON for any number of times and at any stage of project (including during warranty, PWMC) shall be carried out by the bidder as per the instructions of IGGL/ MECON without any cost implication to IGGL/ MECON	Graphic Layout shall be provided by Bidder for approval 1> Changes during design engineering - upto 50% 2> Changes during FAT - 20% 3> Changes during SAT - 10% The above shall be accomodated based on standard industry norm. Please note the same is acceptable globally. We request IGGL/ Mecon to accept the same.	Tender Conditions Prevail .



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95	8.3, 8.4, 8.5	22/ 250	The SCADA system at MMS, Numaligarh shall comprise of the following (but not limited to)- i. Rack Mounted Redundant MMS SCADA Server including the DBMS server ii. Integrated Tape based Backup System along with Drive (LTO 7) (with tapes - 2 nos for Data and 1 no for cleaning ) with each SCADA Server iii. Rack Mounted History server iv. Rack Mounted OPC UA Server If separate OPC server hardware is not required as per bidder's design , then the OPC server hardware shall not be provided by the bidder. The same shall be decided during detail engineering. The OPC server shall be designed to communicate with at least 5 devices with scalability feature. Accordingly the OPC server and workstations shall be provided. It shall be possible to scale up the server by adding device licenses to include more device communication in future without requirement of any hardware upgrade.	We request IGGL to note that the solution offered by Bidder consists of OPC and History Server functionality included in the Main SCADA servers and no separate machine is required. We request IGGL to confirm the same is acceptable.	Separate History server and OPC server machine shall be provided by the bidder as per the tender. Rest Tender Conditions Prevail.
96		26/ 250	Adobe Acrobat pro software	We request IGGL to consider the same in IGGL scope. Bidder shall support IGGL in freezing the count required for the same.	Tender Conditions Prevail .
97	8.13	28/ 250	Bidder shall be responsible for the complete end to end connections for GPRS/ GSM connectivity for RTU communication through MODEM. All the devices required for complete GPRS/ GSM connectivity for RTU communication with SCADA over GPRS/ GSM is shall be provided by the bidder and is included in scope of the bidder. All the works required for complete GPRS/ GSM connectivity for RTU communication with SCADA over GPRS/ GSM, including liasioning works with third party for obtaining GPRS/ GMS connectivity is included in scope of the bidder. All the cost of the operation of entire network till the end of warranty period is included in scope of the bidder.	We request IGGL to provide geographical locations of all RTUs	The locations of RTU is provided in tender. Refer Schematic provided in the tender. Rest Tender Conditions Prevail.
98	8.15	28/ 250	The SCADA system shall interface with third party systems of client such as SAP system, pipeline GIS/ MIS etc.	Please mention all the systems which are envisaged to be interfaced with offered SCADA	The details shall be provided to successful bidder during detail engineering. Rest Tender Conditions Prevail.



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99	8.18, 8.21, 8.27, 8.25, 8.30	28/ 250, 29/ 250	The SCADA servers shall be MMS, BMS-1, BMS-2. Minimum 16 CPU cores CPU (2* octa core) shall be provided for each SCADA server. Minimum 8 Cores CPU shall be provided for the History Server along with the Historian Storage. However, the actual number of core requirement shall be decided based on the OEM recommendation if higher number of CPU cores is required, same shall be provided. Minimum 8 cores shall be provided for the OPC UA server However, the actual number of core requirement shall be decided based on the OEM recommendation and if higher number of CPU cores is required, same shall be provided. Minimum 8 cores shall be provided for the Web server However, the actual number of core requirement shall be decided based on the OEM recommendation if higher number of CPU cores is required, same shall be provided	As per our Offered SCADA requirement we don't require cores and configuration as per the specifications and hence not offered. Suitable Servers & OIC offered which are tested and qualified with our Offered Automation Software platform for trouble free operation.	Tender Conditions Prevail .
100	8.36, 8.38, 8.40, 8.42	30/ 250	Minimum 8 cores shall be provided for each SCADA EWS cum OWS. However, the actual number of core requirement shall be decided based on the OEM recommendation if higher number of CPU cores is required, same shall be provided. Minimum 8 cores shall be provided for each server and workstation. However, the actual number of core requirement shall be decided based on the OEM recommendation, if higher number of CPU cores is required, same shall be provided. Minimum 8 cores shall be provided for APPS Server. However, the actual number of core requirement shall be decided based on the OEM recommendation, if higher number of CPU cores is required, same shall be provided. Minimum 8 cores shall be provided for APPS workstation. However, the actual number of core requirement shall be decided based on the OEM recommendation, if higher number of CPU cores is required , same shall be provided	As per our Offered SCADA requirement we don't require cores and configuration as per the specifications and hence not offered. Suitable Servers & OIC offered which are tested and qualified with our Offered Automation Software platform for trouble free operation.	Tender Conditions Prevail .



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101	8.51	32/ 250	SCADA server software shall be provided for each SCADA server (MMS, BMS-1, BWS-2). The SCADA server software license envisaged is for 20000 data points for each server (plus 50 % spare shall be provided in each server). The SCADA server software shall be expandable in the future without any limitations. Also, if any upgrade is released by the vendor for the software within AMC period, the software shall be upgradable without any changes in hardware.	All upgrades shall be provided based on Bidders' Standard policy. Solution offered shall include any updation of release bugs, patches will be updated upto the contract period. We request IGGL to note the same.	Tender Conditions Prevail .
102	8.65	34/ 250	SCADA system shall fully support MIS/ GIS interfaces. Third party interfaces shall be through a published API (Application Program Interface)	We understand APIs shall be arranged by IGGL. Please confirm Also, we request IGGL to confirm the no. of such interfaces envisaged.	APIs to be developed in SCADA is included in scope of bidder. The details shall be provided to successful bidder during detail engineering. Rest Tender Conditions Prevail.
103	8.67	34/ 250	Minimum Three different redundant fast Ethernet LAN networks are envisaged for the complete SCADA system. However, actual number of redundant LAN networks shall be as per the bidder's design and same shall be finalised during detail engineering	The No. of LANS shall be based on Solution offered based on OEM Design.	Tender Conditions Prevail .
104	8.70	34/ 250	b) DNP3 (SAv2) l) Support Application access control (Authentication) DNP3 Secure Authentication in firmware	We have offered ISA secure system and DNP3 (SAv2) is not required. Hence, not offered. We request IGGL to note the same.	Tender Conditions Prevail .
105	8.70	34/ 250	k) Support Network access control (Authentication) IEEE 802.1X	We have offered ISA secure system and the mentioned support is not required. Hence, not offered. We request IGGL to note the same.	Tender Conditions Prevail .
106	8.79	42/ 250	The RTU test jig unit shall be similar to the RTUs supplied and shall consist of single Processor module for each type of RTU, power supply module, 1 no. of IO card of each type and of each type of RTU, 1 No. communication card of each type, redundant DNP module and any other module supplied with the RTU	The communication modules/ ports and PS unit of RTU offered shall be as per Bidders' standard design. Please note the same is acceptable globally.	Tender Conditions Prevail .
107	8.83	44/ 250	c. Interfacing of SCADA equipments with telecom equipments as defined	Please provide details of Telecom equipment to be interfaced	Details of Telecom equipment shall be provided to successful bidder during detail engineering. Rest tender Conditions Prevail.



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S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
108	8.88	46/ 250	Communication protocol between MMS/BMS-1/ BMS-2 and RTUs shall confirm to OSI Communication model, DNP 3.0 (TCP/IP) or IEC – 60870-5-104 and it will be standard protocol for all the station communications.	Communication of SCADA Servers with RTU shall be over DNP3.	Communication of SCADA servers with RTU and vice versa shall be Over DNP 3.0 (TCP/IP). Rest Tender Conditions Prevail.
109	s, t, u	48/ 250	The electrical works associated with the installation and commissioning of the equipments, earthing of equipments at all sites, powering of equipments at all sites, termination of cables as required shall be the responsibility of the bidder. Supply and laying of Power Cables from Electrical panel to respective RTU Panel, Server Panel, RWS etc cables as required shall be the responsibility of the bidder. t) Supply and laying of cables & connectors from each IED to RTU is in bidder's scope. u) Supply and laying of cables & connectors from Local Station PLC to RTU, Local Control Panel/ TIC panel to RTU & interconnection between SCADA equipments and interfacing of SCADA equipments with Telecom system is in bidder's scope.	Please provide the distances to be considered along with cable size for all types of cables in Bidders' scope. Please note the same is required with exact quantity and size so as to evaluate all bidders at par.	Refer Cl. 8.89 of PJS (PJS No. MEC/05/E5/T/23VC/PJS-094). The size of cable shall be as per bidder's design. Rest tender Conditions Prevail.
110	cc	48/ 250	All Scope regarding cables (all power, signal and control cables shall be FRLS armoured, all serial & LAN CAT cables shall be FRPVC Armoured), cable trays, hot and cold loop testing, cable glands and interconnection of cabling and accessories including cable routing between different cabinets/ equipments is included in bidder's scope. The supply of cable includes the supply of Gland as required at both ends of the cable.	Please provide the distances to be considered along with cable size for all types of cables in Bidders' scope. Please note the same is required with exact quantity and size so as to evaluate all bidders at par.	Refer Cl. 8.89 of PJS (PJS No. MEC/05/E5/T/23VC/PJS-094). The size of cable shall be as per bidder's design. Rest tender Conditions Prevail.
111	dd	48/ 250	All the above ground armoured cable shall be laid in the GI cable tray with cover. The GI cable tray shall be Hot Dip Galvanised with minimum 2.5mm thickness. Supply and installation of GI cable tray with cover as per the site requirement is included in scope of the bidder.	Please provide the distances to be considered along with cable tray size for all types of trays in Bidders' scope. Please note the same is required with exact quantity and size so as to evaluate all bidders at par.	Refer Cl. 8.89 of PJS (PJS No. MEC/05/E5/T/23VC/PJS-094). The size of cable shall be as per bidder's design. Rest tender Conditions Prevail.



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S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
112	ff	49/ 250	Scope regarding cables glands and interconnection of cabling and accessories including cable routing between the following cabinets/ equipments are as follows	The mentioned clause does not mention any scope related to Field cables. We understand all Field Cables are by other contractors. The same is inline with clause 8.89 of 240622060612Vol2webPart1 PJS No. MEC/05/E5/T/23VC/PJS-094. Please confirm the same.	Refer Cl. 8.89 of PJS (PJS No. MEC/05/E5/T/23VC/PJS-094). The size of cable shall be as per bidder's design. Rest tender Conditions Prevail.
113	8.91	53/ 250	iii. The ports (serial and Ethernet) for communication with Main Master Station, Emergency Master Station shall be available on a separate card. There shall be separate serial card(s) for interfacing with IEDs.	The same shall be as per Bidders' standard design. Based on Bidders' design the Ethernet ports for uplink communication are available on CPU and Serial Ports/ card available for communication with IEDs. We request IGGL to accept the same.	The Ethernet ports available on CPU can be utilized for communication with SCADA servers. The ports(ethernet or serial) available on CPU cannot be used for communication with any IED. Rest tender conditions Prevail.
114	8.91	53/ 250	Serial ports available at serial card should be independently and individually configurable at all respect.	The same shall be as per Bidders' standard design. Based on Bidders' design i.e. the ports shall be fixed (RS 232/ RS 485). Connection to third party device/ system can be configurable. We request IGGL to accept the same.	Tender Conditions Prevail .
115	8.92	53/ 250	iv. DI and DO card of the RTU should have minimum 16 IO points. AI card of the RTU should have minimum 8 IO points. The AO and serial card should have minimum 4 IO points / port. However minimum point may further be deliberated considering the sizing of the RTU and availability.	We shall propose 32 ch for DI/ DO and 16 ch AI/ AO. We request IGGL to accept the same	The channels specified in tender are minimum channel density of each card. Higher channel density of each card shall be acceptable. Rest Tender Conditions Prevail.
116	9.4	59/ 250	Each RTU, Each Server Rack should have surge/lightening protection for power supply & communication channel. Surge protector shall be provided for all input supply / communication apart from the inbuilt surge which is available on RTU	SPDs shall be external. Please note the same is acceptable globally. We request IGGL to accept the same.	SPD shall be provided as per Cl. 9.4 of PJS. Rest Tender Conditions Prevail.
117	9.13	63/ 250	Contractor shall guarantee the „OWNER" in writing from the Original Equipment Manufacturer regarding the supply of spares over a period of ten (10) years from the date of acceptance of system.	The same can be confirmed subject to support available from OEMs. In case of discontinuation of product, the support can be extended upto 6 months after notice	Tender Conditions Prevail .
118	Note 2	139/ 250	The I/Os are tentative . Detailed Engineering based on P&ID and Instruments Index for finalization of I/O counts is in Bidder's Scope	We request the customer to provide IO List so that the P&IDs can be verified with the Count available in tender.	The I/O List is provided in tender. Refer Annexure-II to PJS. Rest Tender Conditions Prevail.
119		138/ 250 onwards		Please provide the envisaged schedule for NEGG Phase I &II. Please also confirm what all the sections to be covered in the initial installation and what all the sections to be covered in the next installation? Please note the same is required for both offering SCADA & APPS.	Tender Conditions Prevail .
120	Note 6	141/ 250	Serial Port includes for Electrical (Solar, UPS), Fire & Safety and Cathodic Protection (CP). If during detail engineering, any additional card has to be added, the the same will be paid as per the rates available in the SOR, However wiring, erection etc will be in Bidder's scope.	We request IGGL to confirm the line item which will be identified against additional card in SOR	The rates for addition/ deletion of items shall be as per the SOR provided in corrigendum. Rest Tender Conditions Prevail.



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S.N.	CL. No.	Section/ Page	Section Detail/Description	Clarification / Deviation	MECON's Reply
121	1	145/ 250	The RTUs shall have TCP/IP port and serial port for polling from MMS & BMS.	Polling of RTUs shall be by ethernet ports available on its CPU. Serial Port is not required and thus not considered. We request IGGL to note the same.	The Ethernet ports available on CPU can be utilized for communication with SCADA servers. Serial port is not required for polling of RTU from SCADA. The ports(ethernet or serial) available on CPU cannot be used for communication with any IED. Rest tender conditions Prevail.
122	4.1	145/ 250	The RTUs shall comprise the following subsystems: <input type="checkbox"/> Central processor with system software.	The PDT connectivity shall be via Ethernet to RTU through port on Switch/ Modem. Separate Port is not required and thus not offered	Dedicated port for PDT connection shall be provided in RTU. Rest Tender Conditions Prevail.
123	4.1	145/ 250	<input type="checkbox"/> Back pane/ chassis <input type="checkbox"/> Analog input Module <input type="checkbox"/> Digital (contact) input Module <input type="checkbox"/> Digital (contact) output Module	From Spec we don't see any need for battery backup and backup time. Since power will be available at site; no battery backup is required and thus battery backed PS are not offered. We request IGGL to note the same.	Battery Backed power supply is not required. However, the RTU memeory shall be non-volatile. Rest Tender Conditions prevail.
124	4.1	145/ 250	<input type="checkbox"/> Analog Output Module <input type="checkbox"/> Ethernet ports for polling from MMS and BMS through DNP 3.0 (TCP/IP). <input type="checkbox"/> Serial ports/Ethernet port to connect	Relays shall be external based on Bidders' standard design. Please note the same is acceptable globally	Auxiliary relays shall be provided with each channel of each DO card. The relays shall be SPDT Type (1NO + 1NC). Rest Tender Conditins Prevail.
125	7,8,9,10	146/ 250, 147/ 250, 148/ 250	Module specifications	The same shall be as per Bidders' standard design. We request IGGL to note the same. Please note the same is acceptable globally	Module specification shall be as per bidder's standard design meeting the tender requirements. Rest Tender Conditions Prevail.
126	11	148/ 250	The LED indication shall be provided in the RTU to check the health of RTU communication.	Please note the RTU status shall be available on SCADA. Please note the sam is acceptable globally. We request IGGL to accept the same.	Tender Conditions Prevail .
127	12.1	149/ 250	q) Rate of change of alarm	The same shall be offered via SCADA and not required in the RTU solution. We request IGGL to note the same.	The desired feature shall be available in SCADA. Rest Tender Conditions Prevail.
128		150/ 250	the features of Alarm generation, association of the alarm priority and engineering unit conversion are implemented at the RTU level.	Only Engineering units shall be handled at RTU level. All alarms shall be handled as SCADA level. Thus, the mentioned feature is being offered at SCADA Level. Please note the same.	Alarms shall be available in RTU also. The RTU shall have feature to store all critical alarms in its memory. Accordingly, the RTUs shall be provided. Rest Tender Conditions Prevail.
129	12.8	150/ 250	Type of each I/O modules and time stamping requirements for points in each module.	Time stamping shallbe made available at SCADA Level based on Bidders' offered solution. Request IGGL to note the same.	Tender Conditions Prevail .
130	12.31	153/ 250	For Gas Composition AGA Data writing from SCADA to Modbus Slave Flow Computer through RTU. Vendor should implement logic in RTU for smooth writing of AGA parameters in Modbus Slave after checking its validity and Gas Composition value of 100% as aggregated value. SCADA will writeGC Analysis data to RTU over DNP Protocol, RTU will write all the GC data analysis data to IED (Flowcomputer over Modbus Protocol) Location, Modbus address shall be provided by GAIL/ MECON.	We request IGGL to elaborate the details of system from where the Gas Composition and Gas analysis data is being transferred to the SCADA. Also, what connectivity is envisaged between the above mentioned system and Bidders' Offered SCADA	Gas Chromatograph(GC) shall be available in field to compute the Gas Composition parameters. The GC shall be integrated with RTU at respective station over MODBUS for exchange of data. Rest Tender Conditions Prevail.



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131	12.40	155/ 250	The RTU shall support DNP 3.0 protocol (both DNP 3.0 (Serial) and DNP 3.0 (TCP/IP)) for communicating with SCADA servers. c) The RTU shall have the provision of being polled through its serial port as well as Ethernet port simultaneously from SCADA server.	The communication to SCADA Servers shall be through Ethernet/ TCP/ IP. Serial is not required and thus, not offered	Communication of SCADA servers with RTU and vice versa shall be Over DNP 3.0 (TCP/IP). Rest Tender Conditions Prevail.
132	2.1	162/ 250	The client server at MMS/BMS(BMS-1 and BMS-2) will have real time information of all the pipeline areas.	Please elaborate the term "client servers"	SCADA servers are referred as Client Servers. Rest Tender Conditions Prevail.
133	2.2	168/ 250	GPS time server shall be installed at MMS. As long as MMS and BMS are interconnected, GPS server at MMS shall be used as primary clock to synchronize time of all SCADA machines at MMS, BMS and RWS locations within 2 seconds. RTUs shall be time synchronized by the respective active server within 2 seconds.	The same shall be as per Bidders' standard design.	Time synchronisation philosophy shall be as per bidder's design and same shall be finalised during detail engineering. Rest Tender Conditions Prevail.
134	19	180/ 250	APPLICATION SOFTWARE Project specific application software shall be provided by other contractor for the entire pipeline. However the interfacing and provisions of application software data shall be done by the SCADA vendor with support of Apps vendor.	We understand APPS software is in Bidders' scope as a part of this tender. Please confirm the same.	Complete APPS system (including Leak detection system) as per the tender is included in scope of the bidder. Rest Tender Conditions Prevail.
135				We understand the RTUs required under the scope of this tender shall comprise of non-redundant Processor and PS Modules. Please confirm the understanding.	Bidder's understanding is correct. Rest Tender Conditions Prevail.
136				We request you to provide details on profiles of pipeline. Please note the same is required for APPS system to be supplied by Bidder	The same shall be provided to successful bidder during detail engineering.
137		240/ 250	CERTIFICATE FOR LOGISTICS SUPPORT	The Logistic Support can be confirmed subject to support available from OEMs. In case of discontinuation of product, the support can be extended upto 6 months after notice	Tender Conditions Prevail .
138	7, 8.14.4	231/ 250, 233/ 250	This test aims at keeping the complete integrated system operational for a period of 7 days (on 24 x 7 basis) without any system failures attributable to APPS system. o Test Run: After successful completion of SAT of APPS on pipelines, the APPS system shall be put under Test Run for a minimum period of 15 days as per approved procedure.	Both Clauses mention different period of Test run. We request customer to clarify the exact period for Test run for APPS	Test run (Trial run) for complete integrated system shall be for 15 days after successful completion of System Availability test. Rest Tender Conditions Prevail.





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139	8.11	232/ 250	Upon completion of the tests the system shall ship to site. At start-up of the pipeline a witnessed Site Acceptance Test shall be conducted, followed by a 30 day Availability Test.	We request the customer to confirm the requirement that both Availability Test and Test run are required or either of them. Also, confirm the duration of each.	Both Availability test and Test run are required and shall be carried out by bidder. Availability test shall be for 30 days after successful completion of SAT and test run shall be for 15 days after successful completion of availability test. Rest Tender Conditions Prevail.
140	3.4.16		The setup at MCS shall comprise of following equipments located in SCADA/APPS Server Room of client: a) Real Time Modeling (RTM) -cum- Leak Detection System (LDS) -cum- OPC servers b) Predictive Module (PM) -cum- Compressor / Pump Station Optimizer (CPSO) servers c) APPS Trainer Servers d) LAN switches e) Associated accessories	The mentioned clause shows that at MCS we need to offer 3 servers for APPS- one each for RTM, PM & Trainer. Request IGGL to confirm the no. of servers that are to be provided at BMC1 & BMC2 for APPS.	Kindly note that 2 servers shall be provided one for RTM and one for PM & Trainer combined. These 2 servers shall be provided at each MMS, BMS-1 and BMS-2 locations. Rest Tender Conditions Prevail.
141				At several clauses it was mentioned that the APPS trainer system (including pipeline simulator) is a requirement. However we didn't find any detailed trainer system requirements in the APPS specification. Request IGGL to confirm the requirement for APPS trainer system is in Bidders' scope.	APPS trainer system is required each at MMS, BMS-1 and BMS-2 locations. Rest Tender conditions prevail.
142	12	236/ 250	APPS Vendor shall provide AMC (after warranty) as per contract for another 3 years comprehensive for hardware, software and accessories supplied by the APPS Vendor.	All other clauses on PWMC refer 5 year after completion of 24 months warranty whereas the mentioned clause of APPS specification shows that for APPS Maintenance is 3 years AMC need to be provided after 24 months warranty. please confirm AMC period required after 24 months warranty period is for 3 year or 5 years.	PWMC shall be 5 years comprehensive after completion of main warranty as per the tender. The PO for PWMC shall be issued separately by IGGL as per their requirement. Rest Tender Conditions prevail.
143	2.5	216/ 250	Optimizer (Pump/Compressor Station) Module	From the data provided the IGGL gas grid has only one compressor station and only one compressor in that station (from P&ID). For this one compressor whether the Compressor optimizer module is required. Generally when there are more than one compressor station on the pipeline with each compressor station having multiple compressor units then we can apply compressor optimization to select unit combinations. Please confirm whether the optimizer module is required.	DT, Guwahati (sec-1) is the compressor station and 3 nos. of compressors are envisaged at compressor station. Accordingly, the optimizer module shall be provided. Rest tender conditions prevail.
144	2	188/ 250	The SCADA system shall support DNP 3.0, IEC-5-101, IEC-5-104 and Modbus protocols for polling RTUs from FEP servers. It	Communication of SCADA Servers with RTU shall be over DNP3.	Communication of SCADA servers with RTU and vice versa shall be Over DNP 3.0 (TCP/IP). Rest Tender Conditions Prevail.



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145	7	189/ 250	The SCADA system shall include an analogue data validity analysis function. This validity analysis shall be for out of range, Instrument Bad, scan failure, point on test, RTU on test, manual input etc. Data base qualifiers shall be displayed in the graphics and log in the reports and also indicated as alarms/events. These shall be implemented on all tags SCADA system.	The same shall be as per Bidders' standard design.	Tender Conditions Prevail .
146	1.2, 2.1	161/ 250, 164/ 250	Providing number of RTU as per MR. These RTUs shall be polled and switch-able among MMS and BMS. In case both the MMS & BMS(BMS-1 and BMS-2) are becoming isolated from each other due to any data channel failure, both the MMS /BMS(BMS-1 and BMS-2) may take the role of MCC and poll the RTUs accessible by each MMS /BMS(BMS-1 and BMS-2).	Based on Bidders' standard design, please note the RTUs shall be polled by active server only. We request IGGL to note the same.	Tender Conditions Prevail .
147	5	171/ 250	In the event of failure of a MMS / BMS or inability of a MMS / BMS to communicate with the other MMS / BMS, the associated group of RTUs shall be polled automatically by another MMS / BMS, with out any loss of data.	Based on Bidders' standard design, please note One RTU will be polled at a time. Please note the same. We request IGGL to note the same.	Tender Conditions Prevail .
148				We request IGGL to provide architecture for RTU Locations envisaged.	System architecture shall be as per the bidder's design in-line with the tender requirements. Rest Tender Conditions Prevail.
149		138/ 250 onwards	The IO List given mentions the requirement for Serial/ Ethernet for Third party interface.	There is no segregation of Serial/ Ethernet Ports required. We understand all ports are to be considered as Serial RS232/ RS 485. We request IGGL to confirm the same.	The serial ports as per IO list shall be RS-485 ports. Rest Tender Conditions Prevail.
150	7.11	21/ 250	The SCADA system communicates to the individual IP addressed RTU through any of the following two communication channels – <input type="checkbox"/> Over Dedicated Telecom channel of IGGL with OFC Backbone <input type="checkbox"/> On third party GPRS communication network through dual SIM-MODEM	We request you to confirm the type of connectivity for each type of RTU- GPRS only or GPRS & OFC both	The RTU shall communicate with SCADA over OFC or GPRS , based on the available communication channel. However, each RTU shall have capability for both form of communication from day one. Rest tender Conditions Prevail.
151		12/ 50, 13/ 50, 14/ 50		Please note the architecture shows multiple KVM Monitors. However, we understand the Count of KVM Monitor and switch assembly shall be same as no. of Server Racks. We request IGGL to confirm our understanding.	Bidder's understanding is correct. Rest Tender Conditions Prevail.
152		5/ 269	COMPLETION SCHEDULEMaximum period of	We request IGGL to confirm the minimum period of written intimation for each package/ Lot of SCADA and RTU.	Tender Conditions Prevail .



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153				The schedule presently mentions the first lot of SCADA is to be supplied in 6 months after intimation received within 12 months of FOA and 2nd Lot of SCADA is to be supplied after intimation received within 18 months of FOA. Please note this shows that once an intimation is received both Lots need to be delivered in 6 months. We request you to re confirm the intimation receipt period envisaged . Request the same to be confirmed for Package/ Lot of RTUs as well	Tender Conditions Prevail .
154	SOR	6/ 250	T.S.2.1 For SV Stations (with 1 no. Spare each in Assam and tripura) T.S.2.3 For DT/ RT Stations (with 1 no. Spare in Assam)	We request IGGL to confirm the IO Count to be considered for the spare RTUs to be considered	For Spare SV-type RTU, the IO count of shall be the similar to IO count of RTU-SV-12 (as per IO list). For Spare DT/RT-type RTU, the IO count of shall be the similar to IO count of RTU-DT-Guwahati Ph-II (as per IO list). Rest Tender Conditions Prevail.