GAIL (India) Limited	CORRIGENDUM #1 TO BIDDING DOCUMENT E-TENDER NO. 8000004010 PROCUREMENT OF TELECOM SYSTEM FOR PIPELINE PROJECTS IN KG BASIN	Hydrocarbon Engineer Projects Ltd

The terms and conditions of the Bidding Document stands modified to the extent indicated below and all other terms and conditions of the Bidding Document remain unaltered.

Sl. No.	SECTION	PAGE NO.	CLAUSE NO.	SUBJECT	ADDITIONAL / DELETIONS / MODIFICATION
1	Vol II of II	Page 112 of 134	Annexure D	SAT Report	SAT signed document for Oduru may be ignored in Annexure D
2	Vol II of II	10 of 134 and 79 of 134	2.2 Tlecommunication facilities required and 1.3 SCADA Scope and specification	Amendment	a. SR No 1 - IED Interface to be read as RJ45 instead of IP (RS232). b. SR No 10 - IED Interface to be read as RJ45 instead of RS232. c. SR No 11 - IED Interface to be read as RJ45 instead of RS232. d. SR No 12 - IED Interface to be read as RJ45 instead of RS232.
3	Vol II of II	3 of 134	MR	Change in quantity	Find attached amended MR as Annexure I to this Corrigendum
4	Section 5			Schedule of rates	Revised SOR uploaded in E-tender website
5				Specification of explosion proof Telephones, weather proof and Acoustic Booths	Find attached as Annexure II to this Corrigendum
6				Specification of Portable Power Source cum Calibrator and Multi-meters	Find attached as Annexure III to this Corrigendum

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation :
Seal:

GAIL (India) Limited

RESOLUTION OF TECHNICAL QUERIES RAISED BY BIDDERS DURING PRE-BID MEETING FOR TENDER FOR
Procurement of Telecom system for Pipeline projects in KG Basin for M/s. GAIL (India) limited

E-TENDER NO.8000004010

Hydrocarbon Engineer Projects Ltd

No.	MR Sr.No.	Volume / Specification	Clause no. / Page No.	Bidder's Query		Owner's Reply
				Requirement	Clarification required	
1	5.2 & 6	Volume II of II	17 & 19	Common STM-1 Equipment & SDH Requirements	We understand that a) 1.4 ETH means 4 ETH 10/100 Base T b) two cards of 4 x 10/100 Base T need to be supplied 2 no. of 4 port fast ethernet card is required. 2 nos. of 4 port fast ethernet card for 8 Ports of 10/100 Base T is required to be supplied. Pl confirm the same	a) 1.4 ETH 10/100 Base T may be read as ETH 10/100 Base T. b) Refer in MR clause STM Equipmentt inside Clause 6.0 (STM1 Requriement), - Fast Ethernet 10/100 BaseT -Total 8 nos of Ethernet 10/100 auto sensing interfaces (electrical) in two cards. C) Clarified above.
2	5.9	Volume II of II	84	Diagram	1.) What is the Distance between rajamundry to G. Kunduru to Kopakka to Hanuman junction. 2.) CMS/VCL to Vics (old) to Vics New. 3.) Sentini to HRJ 4) Shriba to Meena	1. Distance Between Rajahmundry to G konduru - Approx. 375 Km, G Konduru to Kondapalli - Approx 12 Km, Distance between Kondapalli to Kopakka - Approx 64 Km. Distance Between Kopakka to Hanuman Jn - Approx -20 Km. 2. Distance between CMS/VCL to VICS (Old) - Approx 1.5 Km and VICS old to VICs(New) - Approx 0..25 Km 3. Distance between Sentini to HRJ - Approx - 0.50 Km 4) Distances between Sriba to Meena -Approx. 1 Km. (For exact distances, vendor is requested to visit the site for more clarity.)
3	2.1	Volume II of II	7	Telecommunication Network Requirement	We understand that GAIL has centralised NMS at Noida and Client Server with Client SW is loacted at other location. We also understand that vendor has to provide one Client server with Client SW at Rajahmundary or any other location as to be suggested by GAIL in KG basin region so that the link can be integrated with the main server at Noida and access control to be made at Rajahmundary or any other required location in KG basin region for smooth functioning	GAIL has NMS of FIBCOM, TEJAS, ECI, WRI, NOKIA at Noida and Mumbai. Vendor has to integrate new NE's in the existing NMS at Noida and Mumbai. Vendor has to provide new NMS of above make only at Rajahmundry for monitoring at regional level.
4	2.1	Volume II of II	7	Telecommunication Network Requirement	Which is existing SDH system working at Rajahmundry?	Existing SDH at Rajahmundry are FIBCOM and ECI .
5	2.2	Volume II of II	8	telecommunication Facilities Required	How many Ex Proof Phones are to be supplied & where are they to be installed?	Quantity is already mentioned in MR. The same has to be installed at SV1/SV2 and VCL.
6	3.1	Volume II of II	10	Design of Network	What is the existing SYNC plan; please provide details on the same.	The same should be provided during detailed engineering after award.
7	3.5	Volume II of II	13	Accessories and other associated items	Which type of power supply is available at locations	Already mentioned in the MR.
8	5.1	Volume II of II	15	STM-1 Network Configuration	The network diagram shown on page 9 of 134 & the diagram shown on page 69 of 134, do not match, hence we are unable to figure out the entire network, locations (existing as well as new) & the distances between adjusent nodes.	Page 9 Diagram is as per SCADA schematic and Page 69 Diagram is of telecom schematic.. (RTU Location of SV1/SV2 not shown in SCADA schematic is mentioned in Telecom schematic. The same may be used for design engineering for SCADA purpose) .
9	5.1	Volume II of II	15	STM-1 Network Configuration	Distance between Koppaka and HunumanJunction is not mentioned in network diagram on page 9 of 134. Please provide the distance.	Clarified in SN No.-2.
10	5.2.1	Volume II of II	16	Protection	As per our basic understanding al the new SDH locations are SPUR locations connected by a single fiber. If this is the connectivity then what kind of route protection expected by the client	Already mentioned in the MR as per clause 5.2.1.

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No.	MR Sr.No.	Volume / Specification	Clause no. / Page No.	Bidder's Query		Owner's Reply
				Requirement	Clarification required	
11	Annexure - II	Volume II of II	66	GAIL,s Existing Telecom Network	Rajahmundry to Kondapalli is shown as existing network but in SDH requirement new STM-1 SDH equipment is proposed at both these locations. Kindly confirm if new SDH systems are to be installed at these locations. If any SDH equipment is present at the nodes then please specify the make & model number.	New SDH equipment are to be installed at Kondapalli/Gkondrou (to be decided during detailed engineering) and Rajahmundry. At Kondapalli-WRI SDH equipment is present, at G Konduru - FIBCOM SDH equipment is present and at Rajahmundry - FIBCOM and ECI SDH equipment is present.Bidder is advised to visit the site to understand the existing network .
12	Annexure - V	Volume II of II	76	Specification of GPS Clocks	At which location GPS clock to be installed and what is the use of it	GPS clock to be installed at VCL .
13					Can we have the site layout including building layout plans for the sites wherever the new SCADA & Telecom services are required. Can we have the equipment rack location (Telecom & SCADA) as well as the ex proof& weather proof phone locations marked on them.	Will be provided for successful bidder
14					Are the Ex proof & the weather proof phones provided at the new sites to be integrated with the existing PABX or Intercom system of the client? If yes are we to provide a new PABX to drive these new extensions? If an existing exchange is present with the client, then please specify the make & model along with existing capacity & the capacity for expansion.	Exproof phones and weather proof phones provided shall connected to existing EPABX at Kondapalli/G Konduru. .The existing EPABX is of Alcatel. GAIL will provide required extensions for new phones.
15					Who is supposed to lay the fiber as well as Telecom & Data cables at the site as well as between sites?	Optical fiber shall be laid and terminated by other contractor. Cabling with in building and terminal is required to be done by bidder.
16	11	Volume I of II	20	Bid Price	We request to consider Zero date for warranty should be taken from the supply date in case of delay in providing the site fronts from GAIL otherwise it becomes a open ended contract .	Tender condition prevails
17		Volume I of II		General - Storage Charge	We have considered storage charges in line with completion period desired by GAIL.In case of delay in providing site fronts, GAIL shall reimburse the storage charges at actual plus 20% of administrative charges.	Tender condition prevails
18	101	Volume I of II	107	Insurance	We request that insurance cost to be reimbursed by GAIL in case of contract extension due to non availability of site fronts.	Tender condition prevails
19	8	Volume I of II	126	Payment Terms	We request to consider the following terms: 1. Supply payment: 2. 10% against installation &Commissioning. In case of delay in providing site fronts from GAIL of more than 3 months from date of supply, this payment shall be released against equivalent BG. 3. 15% after handing over the complete system on turnkeybasis. In case of delay in providing site fronts from GAIL of more than 6 months from date of supply, this payment shall be released against equivalent BG.	Tender condition prevails

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No.	MR Sr.No.	Volume / Specification	Clause no. / Page No.	Bidder's Query		Owner's Reply
				Requirement	Clarification required	
20	3.1	Volume I of II	8	Bid Evaluation Criteria	We understand that the term design/engineering means for a particular project providing technical solution, designing DCN plan and executing the project as per the technical solution & DCN plan.Please clarify and elaborate the term design/engineering.	Same is self explanatory
21	2.1	Volume II of II	7	Telecommunication Network Requirement	We understand that new NEs need to be integrated with existing NMS of the respective vendor i.e. new NEs integrated with the existing Tejas NMS only. Please clarify.	Already clarified above in Sr No-3.
22	6	Volume II of II	18	SDH Requirements	Due to technological development it is possible to have denser cards thereby saving valuable slots in the equipment. please conform 8port 10/100 base T on single card as well shall be acceptable please confirm.	Clarified in Sr No.1 above.
23	2.1	Volume II of II	7	Telecommunication Network Requirement	Huawei NMS is not presently installed in GAIL network .Hence we understand that Huawei shall be required to integrate new Nes only with new NMS to be supplied at Rajamundry. GAIL may please confirm bidder understands.	Clarified at Sr No 3 above.
24	6	Volume II of II	19	STM-1 Equipment	GAIL may please clarify whether all SFPs for all the STM-1 optical interface shall be L1.2 or bidder has to choose SFPs on basis of link engineering in case of latter, GAIL is requested to share the hop details.	Tender condition prevail.
25					Please confirm the total no of RTUs to be supplied in this project is 4 1. For SV2/SV1 2. Similar to K Chureu junction point 3. Replacement of existing RTUs at K Chureu 4. Replacement of existing RTUs at Oduru	As per scope of MR, 4 Nos of RTU is required.
26					Please confirm the type of power supply available at K Chureu	Power Source at K Cheruvu Jn Pt is 24 VDC.
27					Please clarify whether AC supply for running panel auxiliaries like fan, tube light, power socket, panel spare heater etc is available at all the three sites.	GAIL will supply the AC supply.
28					Please confirm as per clause 5.7 of section III. Loose mandatory spares to be provided for commissioning purpose only and are returned to vendor after commissioning.	Mandatory spares has to be supplied by vendor to GAIL as per Clause 5.7 and loose mandatory spares is to be handed over to GAIL. and not be used for commissioning.
29	5.9	Volume II of II	83	Scope of Supply & Service	As per clause 5.9 of section III, please clarify the count of ethernet to E1 converters also specify acceptable make and specification.	Eight Nos of E1 to Ethernet Converter is required for Oduru and K Cherwoo only . The make of the E1 to ethernet converter should be as per clause 5.9 (b).
30	5.9	Volume II of II	83	Scope of Supply & Service	As per the diagram (telecom & SCDA link) provide in clause 5.9 optical to serial are required but as per diagram typical setup for flow computer and MR no such converters are required. Please confirm no optical to serial converters are required.	The conveters in the drawing to be treated as Ethernet to Serial converters. No Optical to Serial Converter is required.

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No.	MR Sr.No.	Volume / Specification	Clause no. / Page No.	Bidder's Query		Owner's Reply
				Requirement	Clarification required	
31	A2.2	Volume II of II	3	Material Requisition	Please confirm that as per MR clause A2.2 9Nos of network switches and 9 Nos of ethernet to serial converters are required.	Clarified at Sr No. - 32
32	A2.2	Volume II of II	3	Material Requisition	As per table provided in clause 2.2 following would be the distribution of ethernet to serial converters (assuming flow computers can be multi dropped on RS485) 1. 2Nos at VCL 2. 1No at VICs (old) 3. 1No at VICs (new) 4. 2Nos at sentini 5. 1No at HRJ 6. 1No at Seriba 7. 1No at Meena 8. 1No at SRCL As per above distribution 10Nos of ethernet to serial converters are required where as only 9 Nos are specified in clause A2.2. Please clarify.	In MR the quantity as 9 lots to be treated as 8 Lots The quantity as lots are mentioned corresponding to each site i.e 1. VCL 2. VICs (old) 3. VICs (new) 4. Sentini 5. HRJ 6. Seriba 7. Meena 8. SRCL Accordingly Vendor to design and supply the quantities of converters & switches for each site to meet the overall operation philosophy and scope of work as per MR.
33					Please confirm that wherever more than one flow computers are present at the location and only one ethernet to serial converter is provided. Flow computers are multi dropped on RS485.	Please refer table 1.3 and 2.2 for interface details of IEDs. Vendor to consider the coverter requierment as per the device interfaces availaible at each site as mentioned in the table. Wherever there are more then one Flowcomputers at any site and having RS485 interface, the same can be multidropped.
34					Ethernet to serial converters required software to be installed on the host PC in the case GAIL SCADA front end which polls the RTU. Please specify the operating system of GAIL SCADA front end.	Installation of Ethernet to Serial converter software at Server is not required.
35					Media converter will simply convert Ethernet to serial without having the knowledge of underlying protocol in this case to integrate flow computers, virtual COM/serial port will be mapped in the GAIL SCADA front end machine using the software provided by media converters. GAIL SCADA poll the PC as if the PC connected via serial port in GAIL SCADA system, the communication channel of the PC will be configured as serial channel and not as a IP. The media converter software will carry out the necessary conversion to handle serial to ethernet. Please confirm this is acceptable	The converter will only only be used as interface converter i.e from Ethernet to Serial (RS232/RS485). Virtual com ports are not requried at Server end . Server will poll the IEDs using TCP encapsulated Modbus Protocol mentioning the IP Port of the destination (Converter) and Modbus TCP Port. Further the Converter output will be Serial Modbus packet.. Vendor is suggested to visit the site for clear understanding of the SCADA polling philosophy.
36	1.5.7	Volume II of II	101	Communications	As per clause 1.5.7 a serial port of CPU cannot be used any other purpose than communicating with GAIL SCADA. We request GAIL to allow using port present on the CPU for communication with PDT & IEDs and same should be allowed to be treated as a spare port.	Tender conditions prevail

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37	2.6	Volume II of II	80	RTU's Requirements	Please confirm the following port counts mentioned in clause 2.6 is final including spare port and no additional ports required on any account. 1. 3 ethernet port. 2. 7 serial ports configurable as RS232 or RS 485. 3. 1 serial of ethernet port for PDT	As per clause 2.6 -Bidder understanding is correct, however if any additional port is required to meet the operational philosophy as per MR, the same needs to be complied.
38	1.5.4	Volume II of II	100	Degital Output	As per clause 1.5.4 DOs should be configurable either as pulse or permanent. It is clarified hence a single DO card can either be configured as pulse type or permanent type. Channel cannot be mixed as a single card. Please confirm that same is acceptable.	DO card to support both pulse type and permanent type.
39					Further it is not specified in the bid the count of pulse type DO channels and count of permanent type DO channels. The IO cards have been counted by treating all the channel as pulse type. Mixing of channel types at later stage may have impact on the quantity of IO cards. Please confirm that DO cards specified in the MR during bid will be final.	The DO inputs mentioned in the MR are final.
40					Please confirm that unarmored cable is to be provided between TIC and RTU panel for field wiring	Armoured cable needs to be provided for instrumentation/field cabling. Please refer Cable specicfication for further details.
41					Please confirm the following IOcounts for RTUs 1. RTU at SV2/SV1 a. DI: 56 as per IO list + 14 spare 70channel. b. DO: 14 as per IO list + 4 spare 18channels? c. AI: 33 as per IO list +9 spare total 42 channels. 2. RTU at Oduru a. DI: 99(exist) +36new+19 spare total 94 channels. b. DO: 6(exist) +6 new+3 spare total 15 channels. c. AI:20(exist) + 20 new + 10 spare total 50channels. d. AO:0 3. RTU at K Chureu a. DI: 39(exist)+ 14new+ 14 spare total 67 channels. b. DO: 6(exist) +8 new+ 4 spare total 18 channels. c. AI: 20(exist) + 11 new + 8 spare total 39 channels. 4. RTU similar to K Chureu a. DI:64 b. DO:16 c. AI:64 d. AO:0	For existing RTU location of KCherwoo and Oduru, vendor has to supply new RTU having I/O count consisting of existing I/O point as well as new I/O points. For new location (SV1/SV2) the I/O list is mentioned int the MR. Vendor to the needful calculation for the total I/O count for each RTU location.

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				Requirement	Clarification required	
42	10.11	Volume II of II	32	Restoration of Optical Fiber	Restoration of optical fiber cable faults after taking over the fiber from pipeline contractor till completion of trial run shall be responsibility of equipment vendor. All Material required for rectification of OFC fault during trial run is in the scope of equipment vendor. All related activities such as locating fault, excavation,Jointing/splicing, protection of joints, backfilling etc shall be completed by vendor We understand that these activities like excavation, jointing/splicing of fiber etc should be in the scope of pipeline contractor, as these points comes under their scope of work. Please confirm.	After taking over the fibre from Laying Contractor by bidder, all the activities(locating fault, excavation,Jointing/splicing, protection of joints, backfilling etc) for jointring of OFC is in the scope of bidder till completion of trial run.
43	7.16	Volume II of II	93	Cabinet,Cubicles,Racks & Control Panel	Specification of rack as mentioned-"All cabinets……maintenance facility" the type of base required for cabinets/racks are not mentioned in tender document. Generally 3 types of base are used in cabinet's plinth, caster wheel and grounding bolts. Please specify.	To be conveyed during detailed engineering after award.
44	10	Volume II of II	96	Factory Acceptance Test	As per clause 10 we understand that SDH FAT shall be carried out at OEM's factory premises. As for this project the quantity of SDH equipments are less, therefore, kindly allow to offer SDH FAT during integrated FAT in India or OEM's testing facility available in India.	Only Integrated FAT will be conducted at vendor premise.
45	A1.4	Volume II of II	3	Material Requisition	Please provide the vendor list for IP66 Boxes and the specs of the box if any.	IP66 Box should be Rittal make or equivalent. IP66 box to house switch, converters, FTC (supplied by other) in consumer locations. The box should protect the equipments from heat and rain in outside environment and provide ventilation for disipation of heat. Vendor to submit the design after award for approval.
46	A1.6 to A1.8	Volume II of II	3	Material Requisition	Please provide the vendor list and specs of explosion, weather proof telephone and acoustic half hood booth.	Provided in corrigendum.
47	A1.10	Volume II of II	3	Material Requisition	We understand that 1 lot means 1 equipment rack need to be supplied for each SDH STM1 equipment site. Please confirm.	Vendor understanding is correct.
48	A1.11	Volume II of II	3	Material Requisition	We understand that 1 lot means each test equipment need to be supplied for each SDH STM1 equipment site. Please confirm.	One lot means test equipment to be supplied for entire project not for each site as per MR.
49	2.2	Volume II of II	8	Telecom Facilities Required	Please confirm that Explosion and Weather proof telephone can be provided of any make, not restricted to FRESNSIG/SIEMENS	Tender conditions prevail
50	3.6	Volume II of II	13	Spares	Please provide more details on the term Commissioning Spares.	Bidder to carry minimum Commissioning spares to carry out commissionng activities without any obstruction/hindrance. Mandatory spares will not be used during commissionoing.

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51	4	Volume II of II	15	Utilites Avilable	Please confirm that DC-DC and AC-DC converters and rectifier can be provided of any make, not restricted to Eltek/Ascom/Dyna	Tender conditions prevail
52	4	Volume II of II	15	Utilites Avilable	As per the table, at four places 24V DC is available. This means vendor need to supply four DC-DC converter but as per MR three quantity of converter is asked. Please confirm the exact quantity of converter.	Tender conditon prevail. Vendor has to supply three ac-dc converter /dc-dc converter. Two converter is to be installed at CMS/VCL & SV1/2.One converter shall be for future requirment.GAIL will provide 48 v DC supply at existing locations at Kopakka, Kondapalli/G kondrou , Rajamundry.
53	5.2	Volume II of II	16	Feature set of Eth ports	We understand that as per GAIL requirement, Ethernet card is required with Layer-1 functionality (Transport) not Layer-2 functionality (Switching). If yes then please remove the features such as VLAN and Priority. Please confirm	Tender condition prevail.
54	7.2	Volume II of II	21	System Guidelines	Please provide the distance between the UPS to DCDB for each SDH STM1 site.	Bidder is requested to visit the site for better clarity.
55	7.2	Volume II of II	21	System Guidelines	Please provide the distance between the DCDB to telecom utilities for each SDH STM1 site.	Tentative distance of 20 mtr may be considered by Bidder. Bidder is requested to visit the site for better clarity.
56	7.2	Volume II of II	21	System Guidelines	Please provide the distance between the telecom equipment rack to main telecom earth bus-bar for each SDH STM1 site.	Earth bus-bar will be provided in the Telecom Room.
57	7.2	Volume II of II	21	System Guidelines	Please clarify that 5 pair armoured cable to be laid between telecom room and guard room is the responsibility of the vendor or Gail. If vendor need to do then please provide the distance between telecom room and guardroom.	It is the responsibility of bidder. Distance is already mentioned in MR
58	7.2	Volume II of II	21	System Guidelines	Please provide the length of the patch cord need to be supplied with SDH STM1 equipment.	FTC shall be installed in the same room near to SDH equipment(work shall be done by other vendor). Vendor to provide necessary patch cord for integration.
59	6	Volume II of II	19	STM-1 Equipment	Since for STM1, SFP L1.2 is already mentioned, then please confirm that "Optical Link Engineering hop wise" need not to be submitted along with the bid as mentioned at page no. 11, 3.1 of VOL-II	Tender condition prevail.
60	6	Volume II of II	19	STM-1 Equipment	Please mention the cross-connect capacity of the STM1 SDH equipment.	Vendor shall design the cross connect capacity based on specs. Same shall be checked during FAT.Tender condition prevail.
61	11.B	Volume II of II	31	Test Catogery Installation & Comissioning	Please clarify that documents mentioned in point B need to be submitted as part of the bid or after the bid finalisation.	The same to be submitted by successful bidder after award of the contract.
62	Annexure-IV	Volume II of II	70	Solar Panel	Please provide the value of how many hours in a day Solar Panel need to be operational.	Please refer clause 4.0.
63	Annexure-IV	Volume II of II	70		Please provide the rating in watts of the Solar Panel.	Please refer clause 4.0.
64		Volume II of II	9	Diagram	As per clause 5.1, VOL-II and MR, 9 STM1 SDH locations/equipments are required but as per the drawing at page no.9 only 7 locations are shown. Please clarify.	Pls. refer telecom schematic at Annex-III. Total 8 STM1 equipment is to be installed .One STM1 equipment is required for future use.Total 9 STM1 equipment is required.
65		Volume I of II	9		Please confirm if point wise compliance sheet is to be enclosed along with the bid.	Yes

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66					The Ethernet switch to RS232/RS485 converters are required as per MR but in the Telecom & SCADA Link configuration drawing : Optical to serial converters are indicated at Meena, HRJ & VICS (Old) & (New). Kindly specify why the optical to serial converters are required at stated locations.	Kindly refer Sr. 32 above
67	A1.11	Volume II of II	3	Material Requisition	1. As per the MR, A.1.11 (Test Equipment) 1 no. of Multimeter and 1 no. of power source calibrator is required. But as per the specifications clause no. 11.1 (Test Instruments) the specifications of these 2 devices are not mentioned. Please give us the detailed specifications of the same.	Specs of multimeter and power calibrator mentioned in correigendum.
68	5.1	Volume II of II	15	STM-1 Equipment	2. As per the section 5.1 STM-1 network configuration, SDH STM-1 node is required at G Kundru. The details of the available power supply is not specified at this location. Please specify the available power and mention the requirement of AC-DC or DC-DC converter (If required).	Clarified at Sr no. 52.
69	4	Volume II of II	15	Utilites Avilable	3. As per the section 4.0 (Utilities Available) at Rajahmundry, 48 VDC/ 230 VAC power supply with 200 watts capacity is available. Please confirm whether 200 watts is available is of 48 VDC or 230 VAC. If 200 watts available from 230 VAC then AC-DC converter is required. Please confirm.	Clarifiied at Sr. no. 52.
70	2.2	Volume II of II	8	telecommunication Facilities Required	4. As per the section 2.2 (Telecommunication Facilities Required) at K Cheruvu, Oduru & GMR, RS-232 converters or switches will be required for integration to the existing SCADA system. - Please specify the available power supply at these locations. - Please specify the connectivity of these stations to the existing network in order to check the requirement of network switches.	Power Source is mentioned in MR. and clarified in Sr No- 26. GAIL will provide E1 link between Rajahmundry to Oduru and Rajahmundry to K Cheruvu. E1 to Ethernet converter is required for Oduru ,Kcheruvu and Rajahmundry as clarified in Sr No. 29. Existing GMR RTU is already connected to network and no additional hardware is required for connectivity.
71	Performa-VII	Volume II of II	57	Project Management & Responsibility	5. As per Performa – VII PROJECT MANAGEMENT AND RESPONSIBILITY (PMR) FORM, PDH & EPABX is specified. Please confirm that PDH & EPABX will not be applicable as these not in scope of this project.	New PDH MUX and EPABX is not required for this project.
72	A1.4	Volume II of II	3	Material Requisition	6. Ethernet switches and serial converters will be required at VICS (Old), VICS (New), HRJ, Meena stations. Please clarify whether a separate cabinet of 2100 x 800 x 800 mm will be required or these will be mounted in existing cabinet.	Clarified in Sr No.-45

GAIL (India) Limited				RESOLUTION OF TECHNICAL QUERIES RAISED BY BIDDERS DURING PRE-BID MEETING FOR TENDER FOR Procurement of Telecom system for Pipeline projects in KG Basin for M/s. GAIL (India) limited E-TENDER NO.8000004010		Hydrocarbon Engineer Projects Ltd
No.	MR Sr.No.	Volume / Specification	Clause no. / Page No.	Bidder's Query		Owner's Reply
				Requirement	Clarification required	
73	2.13	Volume II of II Scada Scope of Specification	82	1. Bidder shall have been successfully supplied & commissioned the same make & model no. of offered RTUs in a hydrocarbon pipeline SCADA system project and should have been working satisfactorily. Bidder shall furnish Global PTR (Proven track record)/ project references list where the proposed RTUs have been used & working satisfactorily as a RTU in hydrocarbon pipeline SCADA system applications/ projects, indicating type of application, Project title & location, End user's name, address & contact details, Supply date, Commissioning date etc.	With reference to the discussion , we are not Ok with the following point mentioned restricting the RTU make and experience, this should not be a criteria for restricting bidders like Wipro , who has experience in Telecom & SCADA area. Its not BEC but its mentioned in the SCOPE part of Tender. Refer page 82 ; clause 2.13. The projects done by Wipro in SCADA/RTU sectors are within 7 years and the make model and type can't be same or similar in all the projects. Request you to please make this point deleted.	Clause 2.13 is deleted . Bidder to offer RTUs of Make as per clause 2.1

Annexure I

MATERIAL REQUISITION

ITEM : TELECOMMUNICATION SYSTEM
MR. No. : GAIL/HRC/51/KGVPL/LKPL/TS/MR-001 R1
PROJECT : PROCUREMENT OF TELECOM SYSTEM FOR PIPELINE PROJECTS IN KG BASIN
BID Doc NO : KGVPL/GAIL/HRC/2595
CLIENT : GAIL (India) LIMITED

S No		Item Description	Unit	QTY
		Project Management, Design, Engineering, Procurement of Materials, fabrications/ manufacturing, Integration, Inspection & Factory Acceptance Testing, Supply, Packaging, Shipping, Insurance, Port Handling, Custom Clearance, Inland Transportation to site, Loading & Unloading, Storage & Safety, Installation, Commissioning, Site Acceptance Testing of SCADA system, Test Run, Integration with Telecom System, Training, Warranty & Documentation with turnkey responsibility of integrating of RTU and Consumer data with existing Telvent SCADA system through IP.		
PART A - LINGALA - KAIKULURU PIPELINE				
A.1 Telecom system (Supply)				
A		Supply Equipment		
A.1.1	8560550321	Supply of SDH- STM1 equipment	nos	9
A.1.2	8560150113	Supply of solar panel with battery backup	nos	7
A.1.3	8560550093	Supply of dc-dc converter/ac-dc converter	nos	3
A.1.4	8525301013	Supply of IP66 boxes	nos	4
A.1.5	8560553993	Supply of LCT	nos	2
A.1.6	8560550473	Supply of explosion proof telephone	nos	2
A.1.7	8560550483	Supply of weatherproof telephone	nos	2
A.1.8	8525502353	Supply of acoustic half hood booth	nos	2
A.1.9	8560550493	Supply of multi-paired armoured 0.5 mm 10 pair cable (approx 30 meter at each location) for extending telephones and other requirement in the station	mtrs	200
A.1.10	8560550393	Supply of equipment racks	lot	1
A.1.11	8560555373	Supply of test equipments OTDR - one no, power generator - one no. , power receiver - one no., Multimeter 1 No, Power source calibrator one no.	lot	1
A.1.12	8560550253	Supply of GPS Clocks	Nos	1
A.1.13	8525550763	Supply of analog phones	nos	8
A.1.14	8560550123	NMS system	no	1
A.1.15	8560550133	Mandatory spares	lot	1
A.2 SCADA system(supply)				
A.2.1	8415703351	System Design, Engineering & Supply of at RTU Remote terminal units for (SV2/SV1) with accessories as per the Technical Specification of RTU	Nos	1
A.2.2	9320753183	Supply of Converters & switch for integrating all the flow computer per Consumer with Telvent SCADA system	Lot	8
A.2.3		**Mandatory Spares**		
A.2.3.1	9320759523	LAN Switch as per technical specification	Nos	4
A.2.3.2	9320753183	Ethernet to Serial Converters as per specification in tender	Nos	20
A.2.3.3	8560550133	RTU mandatory spare cards as per MR	Lot	1
A.2.3.4	8415703351	Supply of RTU similar to KCheruvu Junction Point Type with cables, cabinet etc.	Nos	1

A.3 Telecom system (WORKS)				
A.3.1		Installation, testing and commissioning of SDH equipment not limited to sentini, sirba, VCL,SV1/SV2, SRCL, Kopakka, Kondapalli, Rajahmundry	lot	1
A.3.2		Installation and commissioning of solar panel	nos	7
A.3.3		Integration of SDH equipment with NMS	Lot	1
A.3.4		Installation , testing and commissioning of explosion proof telephone	Nos	2
A.3.5		Installation testing of clocks	Nos	1
A.3.6		Installation, testing and commissioning of weatherproof telephone.	Nos	2
A.3.7		Installation testing and commissioning of analog telephones.	Nos	8
A.3.8		Installation and commissioning of NMS system	Lot	1
A.3.9		Commissioning and trial run of telecom system	Lot	1
A.3.10		OFC jointing and splicing	No.	5
A.4 SCADA system(works)				
A.4.1		Installation, supply of cables, cabling & commissioning of the RTUs with SCADA system as per TS of RTU	Lot	1
A.4.2		Integration of consumer Flow computer with SCADA system as per TS	Nos	9
A.4.3		Training	Lot	1
PART B – K CHERUVU-GVK-VEMAGIRI PIPELINE				
		Design, Engineering, Procurement of Materials, Integration with Telecom System, Training, Warranty & Documentation with turnkey responsibility for integration of existing/new parameters and providing assistance for integration with existing Telvent SCADA for K CHERUVU-GVK-VEMAGIRI PIPELINE.		
B.1 SCADA system (Supply)				
B.1.1		Supply of at RTU Remote terminal units for Oduru, K Cheruvu Junction Point for interfacing old and new parameters with accessories as per the Technical Specification of RTU	Nos	2
B.2 SCADA system (Works)				
B.2.1		Installation, supply of cables, cabling & commissioning of the RTUs with SCADA system as per TS of RTU	Lot	2
B.2.2		Supply of cables, cabling and integrating of additional parameters with existing Telvent make RTU at GMR, and assistance for interfacing and testing of additional parameters with existing GAIL SCADA system.	Lot	1

Annexure – II

SPECIFICATION OF EXPLOSION PROOF TELEPHONES, WEATHER PROOF AND ACOUSTIC BOOTHS

General

The explosion proof telephones shall be housed in a half hood acoustic booth with a flashing beacon installed utside the acoustic booth.

The acoustic booth shall be half hood type with doors. The acoustic booth shall house the explosion proof telephone set, including all accessories for fixing to the telephones set. These telephones shall be connected through EPABX at manned stations.

The acoustic booth will reduce noise level (15 dB) and protect the telephone. Location of these telephones shall be finalized during detailed engineering. Bidder's scope include supply of all materials, interface, cabling, power supply, trenching, back filling etc., all complete.

One galvanized cable tray shall be fixed on the steel pole to guide and protect cables. One hole shall be provided in the floor-mounted plate to facilitate entry of cables.

Telephones shall be provided.

Specification:

Telephone instruments shall be suitable for installation in hazardous areas, of Zone 1, Group II A and II B of IEC standard. Telephones, flashing beacon, howlers shall be weatherproof conforming to IP-66 specification and shall be procured as a package from the telephone instrument manufacturer.

Wiring, Cable glands, shall be included with the equipment. All cables outside the building shall be armoured type. All hardware such as nuts, bolts, washers etc. shall be cadmium plated or zinc passivated.

All equipment shall be coated to ensure proper corrosion protection.

Acoustic booths shall have polyester powder coating of 60 um minimum in case of metal or should be made of FRP. Galvanization thickness for steel pillar and flash support shall be 80 um minimum.

All metallic parts which are not permanently protected against corrosion shall be protected with anti-corrosion painting. Bidder shall indicated the extent of noise reduction for the offered acoustic booths

WEATHER PROOF TELEPHONES.

These types of telephones shall be weather proof confirming to IP-66 specification.

Type Rugged, wall mounted.

The above is minimum requirements however, vendor may offer latest & higher specification model.

Annexure – III
Specification of Portable Power Source cum Calibrator and Multi-meters

Specification of Portable Power Source cum Calibrator and Multi-meters

Portable Power Source cum Calibrator (Voltage & Current):

Portable Power Source cum Calibrator (Voltage & Current) for simulating signal source and measurements function for current (min 4-20 m Amp) & voltage (1-5 Volt) make YOKOGAWA CA11E or equivalent.
The calibrator shall be operable on RTU power supply Voltage level (Both 24 V and 230 V AC). The calibrator shall be self-contained and complete in all respects with power supply (230V AC chargeable adapter), cards termination/ connectors, interconnecting signal and power cables and connectors with carrying case. Calibration certificates shall be included

4 ½ Digit Multi-meters:

4 ½ Digit Multimeter with built-in signal level meters and with carrying case [to measure accurately and serve the function of measurements of DC voltage, AC voltage (True – RMS), resistance, conductance, frequency Test leads, probe holder, alligator clips, batteries, user manual and calibration certificate shall be included]. Preferred Make shall be Tektronix, Fluke, Agilent Technologies, Falcon.