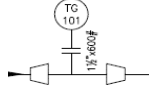


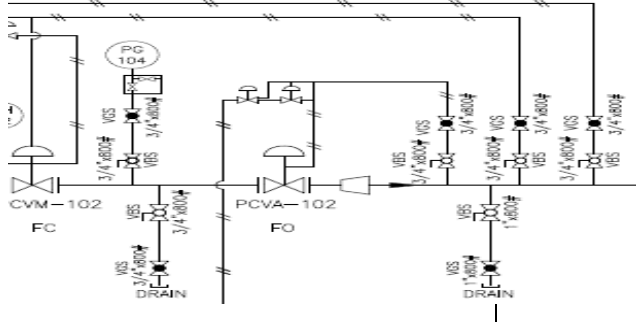
Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
1	Technical Pg.no : 10 of 938 Scope of Work Sor - 1 & 2	Flow Meter Size & G-rating : Turbine (G-1000)	Kindly confirm bidder need to follow meter G-rating mentioned in tender or bidder shall calculate meter G-rating as per process parameter.	Tender condition prevails
2	Technical Pg.no : 19 of 938 2.2.2 Scope of Work & Supply (Project Specific):	LTCS of all material shall be considered at downstream of Pressure regulator including PCV (Active and Monitor	We understand tis clause is applicable for SOR-5 Only. Please confirm.	tender condition prevails and it is applicable for all SOR Items.
3	Technical Pg.no : 33 of 938 3.7 OTHER DESIGN CONSIDERATIONS & REQUIREMENTS	3.7.50 LTCS material is required for pipe and valves used for vent connection, drain connection and PSV discharge headers in all skids.	We understand this LTCS Material will be applicable after the isolation Valve. Kindly confirm.	Tender condition prevails
4	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION	Minimum and design flow shall be 10% and 100% of maximum flow rate respectively of respective streams of PRS and metering.	Bidder understand minimum flow will be 10% of maximum flow. Kindly confirm.	Minimum and design flow shall be 0% and 100% of maximum flow rate respectively of respective streams of PRS and metering
5	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-1	Inlet & Outlet size of skid - 3" x 6"	Kindly confirm bidder to follow this line size or bidder shall calculate line size as per process parameter.	Tender condition prevails. However, inlet flange size shall be 4 inch where inlet line size is below 4 Inch

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SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
6	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-2	Inlet & Outlet size of skid - 4" x 6"	Kindly confirm bidder to follow this line size or bidder shall calculate line size as per process parameter.	Tender condition prevails
7	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-5	Inlet & Outlet size of skid - 2" x 3"	Kindly confirm bidder to follow this line size or bidder shall calculate line size as per process parameter.	Tender condition prevails. However, inlet and outlet flange size shall be 4 inch.
8	Technical Pg.no : 82 of 938 DWG.NO : GAIL-STD-PR-DWG-PID-001 SOR ITEM NO. 1 & 2		Kindly confirm TG upstream and downstream expander size.	Please use the best engineering practice and refer tender document.
9	Technical Pg.no : 82 of 938 DWG.NO : GAIL-STD-PR-DWG-PID-001 SOR ITEM NO. 1 & 2	Piping Class break	Kindly provide piping class break in P&ID.	Piping Class break shall be as per process design parameter
10	General	P&ID	Kindly provide P&ID for SOR-5.	Consider the PRS P & ID as indicated in SOR -4 Typical P &ID.
11	Technical Pg.no : 290 of 938 Standard Specification for pressure relief valves	2.3.3.3 Valve spring shall be selected such that it can permit an adjustment of ±5% of the set pressure, as a minimum.	Kindly which clause bidder shall follow for CRV spring range.	Tender condition prevails
12	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-1	Spring range of PCV/SSV/CRV (in Kg/sq.cm) - 0 to 49		Tender condition prevails
13	Technical Pg.no : 35 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-2	Spring range of PCV/SSV/CRV (in Kg/sq.cm) - 5 to 16		Tender condition prevails
14	Technical Pg.no : 36 of 938 4.0 PROCESS AND DESIGN DESCRIPTION SOR-5	Spring range of PCV/SSV/CRV (in Kg/sq.cm) - 10 to 45		Tender condition prevails
15	Technical Pg.no : 517 of 938 Standard specification for pipeline ball valve	Vent, Drain and sealant injection details	Bidder understand vent, drain and sealant injection are only required for trunnion mounted ball valve and not for floating ball valve. Kindly confirm.	Bidder understanding is correct
16	Technical Pg.no : 822 of 938 Datasheet for Ball Valve 2" to 24"	Stem - (AISI 4140 + 0.003" ENP) / AISI 410/ASTM A 350 LF2 + 0.003" ENP	SS material shall not required ENP coating. Kindly confirm.	Bidder understanding is correct
17	Technical Pg.no : 831 of 938 Datasheet for Ball Valve below 2"	Ball - SS 304/316 with 75NjENP Coating Stem - SS 304/316 + 75 NjENP(No casting)	SS material shall not required ENP coating. Kindly confirm.	Bidder understanding is correct

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ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
18	Technical Pg.no : 862 of 938 List of vendor for bought-out items	7) Quick Opening End Closure (QOEC)	Bidder request to accept Flash point make QOEC. Kindly confirm.	Tender condition prevails
19	Technical Pg.no : 863 of 938 List of vendor for bought-out items	9) BALL VALVES, Pipe Line (API 6D)	Bidder request to accept Steel Strong make ball valve. Kindly confirm.	Tender condition prevails
20	Technical Pg.no : 863 of 938 List of vendor for bought-out items	11) GLOBE VALVES	Bidder request to accept Micon and Niton make globe valve. Kindly confirm.	Tender condition prevails
21	Technical Pg.no : 870 of 938 List of vendor for bought-out items	36) L E L Detection System	Bidder request to accept PPS make LEL detection system. Kindly confirm.	Tender condition prevails
22	General	DRY Gas Filter	Bidder request to accept Emerson make filter for SOR-1 & 2. Kindly confirm.	Tender condition prevails
23	Technical Pg.no : 19 of 938 2.2.1 SCOPE OF SUPPLY (GENERAL):	z) Ball Valve, Globe Valve & Check Valve: The radiography shall be required for all valve castings of rating 600 lbs. and above.	Bidder understand radiography test is not required for valves below 600#. Kindly confirm.	Bidder understanding is correct
24	Technical Pg.no : 30 of 938 INSTRUMENT DESIGN CRITERIA	The second Isolation valves (Globe / plug valves) of all the vent lines shall be of LTCS (Low Temperature Carbon Steel) material.	Kindly confirm which clause bidder shall follow.	Refer reply to query no. 3
25	Technical Pg.no : 33 of 938 INSTRUMENT DESIGN CRITERIA	The second Isolation valves (Globe / plug valves) of all the vent lines shall be of LTCS (Low Temperature Carbon Steel) material.		
26	Technical Pg.no : 30 of 938 INSTRUMENT DESIGN CRITERIA	The second Isolation valves (Globe / plug valves) of all the vent lines shall be of LTCS (Low Temperature Carbon Steel) material.		
27	Technical Pg.no : 82 of 938 DWG.NO : GAIL-STD-PR-DWG-PID-001 SOR ITEM NO. 1 & 2		rm isolation valve size in regulator sensing is 1/2" or 3/4".	Bidder to consider 3/4" isolation valve.

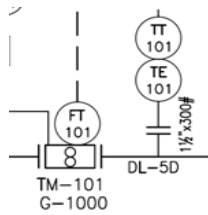
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SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
28	General	Operating Temperature	Kindly provide operating temperature for all SOR - 1, 2 & 5	Working temp. 0 to 50 Deg. C and design Temp. -29 to 65 Deg. C for all SOR items
29	General	Isolation Valve for instruments	Bidder request to accept instrument isolation valve shall be 1/2" instead of 3/4". Kindly confirm.	Refer the reply to query no.27
30	Technical Pg.no : 764 of 938 PMS A1A (150#)	FLNG. WN - 0.5" to 1.5"	Bidder request to accept SW type flange instead of WN type flange of 0.5" to 1.5". Kindly confirm.	Confirmed
31	Technical Pg.no : 22 of 938 2.2.2 Scope of Work & Supply (Project Specific):	11) Canopies for all instruments, etc. are required. Shed/ Enclosure/ fencing/ rain protection for entire skids of smaller sizes. Shed/ Canopy for FC and all other instruments/ transmitters. Requirement of fencing/ enclosure for complete metering skid with top cover / rain protection	Bidder understand canopy is only for instruments and material shall be Ms with 1.6 mm thickness and fencing is not in bidder scope. Kindly confirm.	Bidder understanding is correct
32	Technical Pg.no : 82 of 938 DWG.NO : GAIL-STD-PR-DWG-PID-001 SOR ITEM NO. 1 & 2	Notes: 2. Filter shall be designed for 125% of flow capacity	Bidder understand that only filters of the filtration section to be sized for 125%. All piping & valves shall be design for 100% flow. Please confirm.	Bidder understanding is correct
33	Technical Pg.no : 22 of 938 2.2.2 Scope of Work & Supply (Project Specific):	15) Pressure test points, purge and vent points shall be fitted as indicated in the Installation Schematic drawing attached herewith. When a test point is not provided on an item of equipment, a point shall be provided on the adjacent pipe work. All the ends of drain and vent points shall be plugged. The vent purge valves provided at the inlet and outlet ends shall not be fitted very close to the base level of the skid, which will be very difficult to be operated. A common vent header with flame arrestor along with flapper shall be provided.	Bidder understand vent shall be provided with flame arrestor. Kindly confirm.	Bidder understanding is correct
34	General	Insulation	Kindly confirm turbine meter requires insulation OR Not. If required Please confirm insulation material.	bidder to adopt the best engineering practice
35	FCV Charpy test requirement	As per Tender QAP of FCV Charpy test is required and as per datasheet and Tender Spec Charpy test is not applicable.	Kindly conform QAP or tender spec to be followed for Charpy requirement.	QAP shall be followed
36	General	U-Stamp for filter	Kindly confirm whether filter is required U-stamp or not.	U- stamp shall be required.
37	General	Regulator sensing line tapping	Bidder request to accept regulator sensing line tapping are taken from header instead of main line. Kindly confirm	Bidder understanding is correct
38	Page 9 of 938 Technical 1.0 OVERALL JOB REQUIREMENT:	1.6 For SOR Item No.5, Installation & commissioning of dry gas filtration (1w+1s) and pressure reduction system (1W + 1S).	Kindly provide P&ID for SOR 5	Refer reply to query no. 10
39	Page 12 of 938 Technical 2.1.1 Design and Engineering:	(d) 2 nos. of GPRS modems shall be supplied for each metering skid and same modem shall be compatible for field and panel mounted flow computers.	Kindly confirm GPRS modem to be supplied as per the qty of Flow computer.	Bidder understanding is correct

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SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
40	Page 12 of 938 Technical 2.1.1 Design and Engineering:	Communication with GAIL's RTU/ SCADA system is envisaged to ensure effective and reliable control, management and supervision of the consumers from centralized location.	Bidder will provide all the details required for communication with RTU/SCADA, But configuration with GAIL Scada is in GAIL scope. Kindly confirm.	Configuration shall be done by supplier in coordination with GAIL.
41	Page 13 of 938 Technical 2.1.1 Design and Engineering:	Gas Data and FCV set point is also to be remotely sent to Flow computers through GPRS Modem.	Bidder understands gas data entry in flow computer shall be modify by laptop and fcv set point shall be done in positioner only. GPRS modem is only used for fetching the data. Kindly confirm.	GPRS shall also be required to configure the set point of FCV.
42	Page 17 of 938 Technical 2.2.1 SCOPE OF SUPPLY (GENERAL):	(d) Control panel with receiver instruments & accessories such as, indicating LED lamps, required intrinsic safety barriers, isolators, printers & Metering panel with dual stream Flow computers, Printers and its accessories, Communicator for Field Instruments, signal converters, hub, GPRS Modem, hardware required to establish various serial link / connectivity with different instruments/ items (like Printers, SCADA/ RTU, FC etc) mentioned elsewhere	Control panel is not required for SOR 1,2 and 5. Kindly confirm	Confirmed
43	Page 19 of 938 Technical 2.2.1 SCOPE OF SUPPLY (GENERAL):	(t) Inlet Pressure and temperature shall be available on the both Flow computers.	Inlet PT and TT is not available in P&ID of SOR 1, 2 & 5. kindly confirm requirement of Inlet PT and TT.	Inlet PT and TT is required before filter in all SOR except SOR Item No.5
44	Page 20 of 938 Technical 2.2.2 Scope of Work & Supply (Project Specific):	a) 2 sets of Solar Panel with its accessories, Battery, charger and 2 sets of Solar powered field mounted Flow computers is required for Metering Skids.	Bidder understands 1 nos. of solar power system required for each metering system/flow computer, Kindly confirm.	Bidder understanding is correct
45	Page 12 of 938 Technical 2.2.2 Scope of Work & Supply (Project Specific):	The power consumption of Flow Computer, Modem, PT (low power consumption) and other associated utilities of online system shall be considered for Backup calculation and finalisation of sizing of Battery.	Bidder understands that 230V AC power supply for Pilot heaters will be provided by GAIL and No solar power backup is required for Pilot heater. Kindly confirm.	Bidder understanding is correct
46	Page 22 of 938 Technical 2.2.2 Scope of Work & Supply (Project Specific):	Alarm shall appear in case of failure of external power supply.	bidder understands that power supply failure alarm will be generated in Flow computer.	Bidder understanding is correct
47	Page 28 of 938 Technical 2.2.2 Scope of Work & Supply (Project Specific):	3.3.17 Bidder shall provide Indications signals like Inlet PT, Inlet TT, Filter DPT-1, Filter DPT-2 and PID control for FCV in all Flow computers (all streams).	There is no inlet PT and TT is provided in the P&ID of SOR 1 & 2. Kindly confirm requirement of Inlet PT and TT.	Refer the reply to query no. 43

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SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
48	Page 31 of 938 Technical 3.7 OTHER DESIGN CONSIDERATIONS & REQUIREMENTS	Accuracy of metering pressure transmitters (used for custody transfer application) shall be +0.04% of FSD or better.	Kindly accept accuracy of metering PT as 0.075% of FSD.	Tender condition prevails
49	Page 34 of 938 Technical 3.8 SOLAR Panel and Battery required for Field mounted Flow computers :	Input and out required for flow computer Minimum I/O required is as follows: <ul style="list-style-type: none"> • Pulse input for LF and HF • 2 input from RTD Pt 100 (4 wire) • 2 Analog input for metering PT • 4 Digital Inputs • 2 Digital Outputs • Analog Inputs (skid inlet pressure and temperature) 	1. Kindly confirm total I/Os required for Flow computer. 2. Kindly confirm whether Analog inputs (skid Outlet PT and TT) is transmitted to the FC. Bidder understands 1 no. input from RTD and 1 analogue input from metering PT is required for FC. Kindly confirm.	3. Bidder understanding is correct
50	Page 41 of 938 Technical INPUT SIGNAL CAPABILITY:	In place of Metering TT, signals from RTD shall be directly terminated in Flow Computer.		
51	Page 82 of 938 Technical P&ID		Bidder understands at metering side TT is not required, signals from RTD shall be directly terminated in FC, Kindly confirm.	Bidder understanding is correct
52	Page 62 of 938 Technical INPUT SIGNAL CAPABILITY:	b) Pressure & temperature inputs for the calculation of standard flow. In place of Independent Metering Transmitters, the Metering PT/ TT can also be in built/ integral.		
53	Page 41 of 938 Technical	b) Pressure & temperature inputs for the calculation of standard flow. In place of Independent Metering PT (Pressure Transmitter) shall be independent and in built/ integral Pressure	Kindly accept flow computer with integral as well as indepent PT.	Tender condition prevails
54	Page 66 of 938 Technical 5.2.2 TURBINE FLOW METER	While selecting the meter, bidder to ensure that the fluid velocity in the turbine meter shall not exceed 15 m/s.		
55	Page 443 of 938 Technical Datasheet TURBINE FLOW METER	6. Velocity through Turbine Meter shall not exceed 20 m/s.	Kindly confirm velocity through Turbine meter.	Velocity through Turbine Meter shall not exceed 20 m/s.
56	Page 78 of 938 Technical 5.16 HYDROCARBON (LEL) DETECTORS	3 No. of LEL detectors shall be provided for Metering skid. The isolated 4-20mA analog output from each detector shall be taken to LEL Monitors (to be mounted on Metering Control Panel.	LEL monitor is not required for SOR 1 and 2, LEL detectors will directly communicate with Flow computer via 4-20 mA output. Kindly confirm.	Bidder understanding is correct
57	Page 79 of 938 Technical 5.16 HYDROCARBON (LEL) DETECTORS	One no. Portable purge Hydrocarbon calibrator complete with 20 liter volume bottle of calibration gas of known gas/ air mixture, pressure regulator, adapter cap, flow meter shall be provided.	We understand that, one no of LEL Calibration kit for Each SOR 1, 2 to be supplied with each skid. Please confirm.	One number of LEL calibration kit shall be required for each metering skid except SOR no 5.

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Technical Query				
58	Page 79 of 938 Technical 5.16 HYDROCARBON (LEL) DETECTORS	One set of portable gas detector shall be provided complete with its controller, audiovisual alarm and shall be suitable for use in hazardous area.	Kindly confirm the requirement of Portable Gas detector.	portable gas detector is not in the scope of supply
59	General	LEL detectors	Kindly confirm location of detectors in skid.	Shall be done during detail engineering after award of contract
60	General	Datasheets	Kindly provide technical specification or datasheet for field mounted Flow computer, Pilot Heater.	Refer the tender page no 366 of 938 and document no. GAIL-STD-IN-DOC-TS-021
61	Page 428 of 938 Technical Datasheet of RTD	14. Transmitter Power Supply: 4 V DC (2 wire)	14. Transmitter Power Supply: 24 V DC (2 wire)	Bidder understanding is correct
62	Page 436 of 938 Technical Datasheet of LEL detector	18. Quantity: Minimum 6 nos.	Bidder understands QTY of detectors shall be as per mentioned in SOR.	3 LEL are required with each skid against SOR item N o 1,2,3,4 and 06 No. of LEL are required for SOR item No.6
63	General		Cabling upto skid JB/ Flow computer is in bidder's scope, Further extension upto RTU/SCADA is in GAIL scope for SOR 1 & 2. Kindly confirm.	Bidder understanding is correct
64	General	Meter sizing	Meter sizing is same as line size or bidder need to calculate as per process parameters kindly confirm.	Refer reply to query no. 5, 6 & 7.
65	General	SOR 5	Bidder understands LEL detectors are not required for SOR 5. Kindly confirm.	Bidder understanding is correct
66	General 2.2 s ope of supply	PCV&SSV 100% RT is applicable for 600# and above	As per general scope of supply only PCV & SSV RT is applicable for 600# and above only. Where as in datasheet it is mentioned as "required" in generically. Kindly cofnirm which to follow.	Data sheet to be followed.
67	GAIL-STD-IN-DOC-TS-014 (Standard spec for PSV)	4.0 Inspection and testing: As per clause 4.2 EN 10204 3.1 certification is applicable for materials of PSV.	Where as per tender bought mechanical QAP for PSV it is given as EN 10204 3.2 certification. Kindly confirm the PSV certification type EN 10204 3.1.	QAP to be followed.
68	GAIL-STD-IN-DOC-DS-017 (Datasheet for RPD meter)	Type approval for custody transfer application from weights and measures approved laboratories, such as National & International standard laboratory shall be submitted	Kindly clarify only Weight & measures Type approval certificates are needed or Weight & measures to be performed individually for each meter	Tender condition prevails
69	GAIL-STD-ME-DOC-TS-008 (specification of Ball valve)	The pressure shall be 30 minutes hold for hydrotest of ball valve,	As per API 6D requirement maximum pressure holding is 5 minutes for hydrotest pressure. Hence bidder request to follow same. Kindly confirm.	Tender condition prevails

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Technical Query				
70	GAIL-STD-ME-DOC-TS-016 (Technical notes of Pipeline valves)	Clause 5.0 Inspection and testing, forged valves: Hydrostatic test on 10% valves selected on random basis.	As per tender mechanical QAP for ball valves it is given as 100% scope for remark / sampling plan inspection. Kindly confirm the percentage scope of inspection for forged ball valves	kindly follow the QAP
71	General	PCV & SSV	Kindly accept Monitor regulator with Integral SSV for SOR-1 & SOR-2.	Tender condition prevails
72	Scope of work SOR 3, SOR 4 (Page no. 9 of 938)	Field & Control Panel Mounted FC	We understand that Field mounted flow computer is required for initial commissioning purpose and when control room is ready control room mounted flow computer with panel is required for SOR 3 & 4. For SOR 6 Control room mounted flow computer is required. SOR 3 & 4 : 2 nos. field mounted FC + 2 nos. control room mounted FC per skid SOR 6 : 2 nos. control room mounted FC per skid Please confirm	Field Mounted & Control room Mounted FC is required one each with each stream of metering skid as per tender
73	Scope of work SOR 3, SOR 4 (Page no. 9 of 938)	LEL Detectors along with connection to flow computer	We understand that LEL detector will be connected to flow computer for SOR 3 & 4. Kindly confirm whether LEL Monitor is not required for SOR 3 & 4. Please confirm	LEL monitor is required where control room mounted flow meter is envisaged. Else LEL shall be configured with field mounted Flow computer.
74	General	HMI / SCADA / supervisory system	We understand that HMI / SCADA / supervisory system is not required for SOR 3, 4 & 6. Please confirm	Bidder understanding is correct
75	Page no. 49 of 938	Mandatory spares for Gas ultrasonic flow meter	Mandatory spares for Gas ultrasonic flow meter is not given. We understand that the same is not required. Please confirm	Bidder understanding is correct
76	General	Temperature	Request to please provide inlet and outlet temperature for SOR 3,4 & 6	Working temp. 0 to 50 Deg. C and design Temp. -29 to 65 Deg. C
77	Page no. 20 of 938	LTCS of all material shall be considered at downstream of Pressure regulator including PCV (Active and Monitor).	We understand that LTCS Material and valves are required downstream of active regulator for SOR 4 & 6. For SOR 3, CS material required for complete skid. Hence we understand that PMS for skid need to be considered as follows. Please confirm 1. PMS B1A 300# (before PRS) and A1A 150# (After PRS) required for SOR 3. 2. PMS D1A 600# (before PRS) and B4A 300# (After PRS) required for SOR 4. 3. PMS D1A 600# (before PRS) and B4A 300# (After PRS) required for SOR 4.	Tender condition prevails for all SOR Items
78	Page no. 20 of 938 Page no. 48 of 938	Flow control valve size shall be of the line size and shall be of full port design size : same or higher than meter size	we understand that minimum size of control valve should be same size of line size. Please confirm	Bidder understanding is correct

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Technical Query				
79	Page no. 41 of 938	In place of Metering TT, signals from RTD shall be directly terminated in Flow Computer	We understand that RTD can be directly connect to flow computer without TT for SOR 3 & 4. Please confirm	Bidder understanding is correct
80	Page no. 76 of 938	For USM, OIML certificate as per new OIML CS guidelines shall be provided.	We understand that OIML Accuracy class 0.5 is required for USM. Please confirm	USM meters to be certified for accuracy class 0.5 from legal metrology of country of origin
81	Page no. 77 of 938	This scheme/ configuration shall be implemented in the Supervisory system being provided by the Bidder	We understand that Supervisory system is not in bidder's scope for SOR 6. Please confirm	refer the reply to query no 74
82	Page no. 17 of 938	All types of cables for signal, RTD, alarm, control, power, communication, earthing cables (these cable to be used in field, skid and control / solar panel)	Kindly provide Distance from control room / RTU to skid for supply of power and signal / communication cable.	Cable length distance between from control room to skid shall be approximatly 200 meter.
83	Page no. 931 of 938 Page no. 374 of 938	GPRS modem and GSM modem specification	There are two different specification is given for modem. We understand that GPRS modem which is having specification on page no. 931 of 938 is required to consider. Please confirm	Specification as per page no 931 of tender document to be considered
84	Page no. 69 of 938	Pressure drop across filter in clean condition as 0.2 kg/cm2 and in dirty condition as 0.5 kg/cm2	We understand that we have to consider this pressure drop for filter. Please confirm	Tender condition prevails
85	P&ID for SOR 3,4,& 6	Pilot heater	We understand that pilot heater is not applicale for SOR 3, 4 & 6. Please confirm	Pilot heater is required for SOR Item No 3 to 6.
86	Page no. 22 of 938	Field mounted flow computer with Ethernet port	We understand that field mounted flow computer should required with Ethernet port. Please confirm	Bidder understanding is correct
87	P&ID for SOR 3,4,& 6 Page no. 77 of 938	CHECK & PAY CONFIGURATION & PROCEDURE for USM BASED METERING SKIDS: ONLY SOR ITEM - 6	We understand that check and pay configuration (Z configuration) as per P&ID is applicable only for SOR 6. Please confirm	Bidder understanding is correct
88	Page no. 61 of 938	Flow Computer Validation Software:	Now a days GAIL does not ask any Third party validation software due to validity & renewal issues. Other PMCs like EIL & MECON doesn't ask for this software also for GAIL metering skid projects. Hence please reconfirm the requirement.	Bidder understanding is correct for non requirement of validation software.
89	P&ID for SOR 3,4,& 6	GC Tapping	Kindly confirm straight length requirement of GC tapping which is applicable for SOR 6	tander condition prevails
90	General	GAIL Hazira calibration	We understand that GAIL Hazira lab is acceptable for wet calibration of Ultrasonic flow Meter at available pressure of 45-49 kg/cm2.	Bidder understanding is correct
91	Page no. 145 of 938 Page no. 417 of 938	Pilot operated pressure relief valves shall be used for special services and where set pressure is closer than 10% of the operating pressure, in general. PSV Datasheet : Conventional	FOR SOR3 & SOR6 Operarting pressure is within 10% of set pressure. Please confirm whether Pilot operated or conventional PSV required.	Tender condition prevails

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SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
92	Clause 5.15, Page 74-76 of 938	Certification for Custody Transfer and Calibration	We understand that for offered Gas Ultrasonic Model meets all requirement of OIML R 137 (2012) and along with bid, bidder needs to submit latest OIML CS Certificate as per latest OIML CS guidelines.	OIML compliance report (for OIML R 137 part 1 & 2), from the legal metrology from country of origin is also acceptable.
93	List of Vendor for Brought - Out Items, Page No. 860 of 938	Bidder shall strictly follow the Recommended Vendor List attached with the tender document for various items.	Our understanding is the Ball Valve, USM meter, Pressure Regulators & SSV will be accepted on the basis of PTR. Please confirm.	Tender condition prevails
94	Job Specification for Gas Metering Skid, Page No. 76 of 938	For USM, OIML certificate as per new OIML CS guidelines shall be provided. Meter without validated OIML CS certificate is liable for rejection.	Clarification on OIML certificate: It may be noted that as per OIML guidelines the certificates issued before 2018 are also valid and hence we request Lyon / GAIL to confirm the acceptance of the OIML certificate issued before 2018.	Tender condition prevails and refer the reply to query no.92.
95	PID, Page No. of 83 of 938, Clause - PID	Z-prover	Our undersatding is Z-prover is applicble for only Item-6. please confirm	Bidders understanding is correct
96	PID, Page No. of 83 of 938, Clause - PID	Z-prover with NRV	as per our understanding the NRV is not required in z-Prover, it create additional flow disturbance. So we requesting you to remove the NRV from Z-Prover. Please confirm.	NRV is not required in Z prover line
97	PID, Page No. of 83 of 938, Clause - PID	Outlet of Skid with GC	our undersatnign is GC supply is only for Item-6, we have to maintain 20D straight length to install it. Please confirm	Tender condition prevails
98	PID, Page No. of 83 of 938, Clause - PID	Outlet of Skid with GC	GC is not required for item 3, 4. please confirm.	Bidders understanding is correct
99	Process & Design Description, Page no. 11 of 938, Table-A	For SOR 6, Inlet lien Size mentioend as 8" & Outlet line size mentioend as 10".	For SOR 6 , calculated velocity at downstream of PRS with 8" pipe size is 18.7 m/s for maximum flow rate of 1.2 mmscmd and minimum pressure of 24 kg/cm2 and operatign temperature of 40 Deg C . However as per Table -A Outlet line size is mentioned as 10". Please clarify whether PRS downsteram size shall be selected as 8" and at skdid outlet we shall provide expander of 8"X10" or PRS downsteram size to be selected directly as 10". This will have impact on seelction of pipe, ball valve size, FCV size at downsteram of PRS. Please clarify PRS downsteram size to be selected as 8" or 10".	PRS downstream size shall be provided as 10 IN

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
100	JOB SPECIFICATION FOR GAS METERING SKID, Page no. 76 of 938, clause no. 5.15	<ul style="list-style-type: none"> OIML R137-1 & 2: Gas meters-Part 1: Metrological & technical requirements Part-2: Metrological controls & performance test. For USM, OIML certificate as per new OIML CS guidelines shall be provided. Meter without validated OIML CS certificate is liable for rejection. 	<p>As per PNGRB T4S-NGPL-GSR808-Amendment.</p> <p>(v) in Annexure II, under the heading "Metering Equipment", for the words beginning with, "AGA Report No. 9" and ending with the words, "Ultrasonic Meters.", the following shall be substituted, namely: - "AGA Report No. 9 Measurement of Gas by Multi-path Ultrasonic Meters and OIML R 137 Parts 1 and 2, Part1: Metrological and technical requirements, Part2: Metrological controls and performance tests". VANDANA SHARMA, Secy.</p> <p>As per PNGRB Guideline- GSR808 Ammendment , it has mentioned that Ultrasonic Meter shall have " AGA Report No 9 Measurement of Gas by Multi-path Ultrasonic Meters and OIML R 137 Parts 1 and 2, Part 1: Metrological and technical requirements , Part 2 : metrological controls and performance test" .</p> <p>We understand that USM should be in compliance to AGA9 and OIML R137 part 1 & 2 as per PNGRB regulations and valid type approval for custody transfer application needs to be provided by the bidder. Please confirm that our understanding is correct.</p>	refer the reply to query no.92 and 94.
101	Testing and Inspection, Page no. 37 of 938, Clause no. 6.1.1	All pressure boundary materials shall have certified material test reports (CMTRs) or certificate of compliance as per the design code. Certifications shall be in accordance to EN 10204 Type 3.2 for pressure parts and Type 2.2 for other parts.	We understand that 3.1 certification is applicable only for Ultrasonic Meters. However SSV , Pressure regulators, Filter shall be 3.2 certification irrespective of its manufacturign locaiton. Please cofnrirm our understanding is correct.	Bidders understanding is correct
102	Filter Capacity, Page no. 82 & 83 of 928, 'Note No. 2 of P&ID	Filter Design Capacity as 125% mneitoned in P&ID Notes	You are requested to accept the Filter to be designed at 100% of caapcity only. Since skid pipe line, filter inlet ball valves are designed for 100% capacity, if we select filetr for125% of flow capacity, it will overdesigned. Please confirm your final decision on filter design requirement whether it shall be done at 100% or 125%. This will help us to select appropriate vessel size, QEOC size and numebr of elements.	Tender condition prevails, i.e filter shall be designed at 125% of skid capacity
103	Datasheet for Dry Gas Filter, Page no. 430 of 938, Clause no. 21	Presure drop across Filter in clean condition as 0.1 kg/cm2 & dirty condition as 0.2 kg/cm2	As per datasheet presure drop across filter in clean condiiton is 0.1 kg/cm2 & in dirty condition as 0.5 kg/cm2 . However as per job specificaiton clause no 5.3 Pg No 69 of 928 it has indicated that Pressure drop across filter in clean condition as 0.2 kg/cm2 and in dirty condition as 0.5 kg/cm2. Both are contradactory. Please clarify your final requirement of pressure drop in clean & dirty condiiton.	May please consier the datasheet
104	Anenxure-A, Page no. 10	Filter shall be be Wet & Dry Gas Filter for all SOR. SOR V is mentioend that Filetr shall be Wet gas Type.	We understand that we have to supply Dry Gas Filter for all SOR as per datasheet available on Pg No 430. We do not have to refer Wet gas Filter Datasheet as available on page no 818. Please confirm our understanding is correct.	Bidders understanding is correct

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
105	Filter Datasheet Micron Removal Size for Dry Gas Filter, Page no. 430 of 938, Clause no. 20	Solid & Liquid Particles of 3 Micron & above with 99% efficiency	We understand that we have to supply dry gas filter which removes solid particles of 3 micron & above with 99% efficiency. Clause No 20 of Filter Datasheet shall be reread as " Removes Solid Particles of 3 Micron & above with 99% efficiency". Please confirm our understanding is correct. Same was accepted in earlier tender as well.	Tender condition prevails
106	Testing & Inspection, Page no. 39 & 457 of 938, Clause no. 6.3.1.19	As per clause no 6.3.1.a 100% radiography shall be carried out on all casting where as as per USM datasheet Radiography/Charpy: Required.	As per clause no 6.3.1.a 100% radiography shall be carried out on all casting which is contradicting with USM datasheet point no 16. We understand that 100% radiography to be performed for Casted USM Body and UT to be performed for Forged USM Body. Please confirm our understanding is correct.	Tender condition prevails
107	Requirement of U Stamp Vessel, Page no. 752 of 938, Clause no. 3.4.19	The filter shall be provided with Quick Opening Closure (if specified in the data sheet) for easy removal & replacement of filter elements for maintenance. The diameter of QOC shall be same diameter as that of main vessel and shall conform to all applicable ASME code requirements and will carry ASME U Stamp.	We understand that Filter & QEOC both shall be U stamp. Please confirm.	Bidders understanding is correct
108	Filter Orientation, Page no. 13 & 430 of 938, Page no. 2.2.2.c	For Filter Shell diameter of 8" or lower, Dry gas Filtration for natural gas of Vertical configuration is required and as per filter datasheet filter orientation is horizontal.	We understand that Filter orientation shall be horizontal as per datasheet. Please confirm our understanding is correct.	Tender condition prevails
109	Skid Layout, Page no. 33 of 938, Clause no. 3.7.38	During detail engineering; dimension / lay-out of skid to be furnished for our review and shall be modified to accommodate the skid in the available plot area at respective consumer terminals	You are requested to provide tentative plot layout as during bidding stage it take slot of time to get skid layout which impact on skid GAD and subsequent skid delivery.	Tender condition prevails
110	Skid configuration, Page no. 33 & 12 of 938, Clause no. 3.7.40 & 2.2.2.12	As per clause no 3.7.40 - It is desirable that the Layout of the skid is symmetrical across the center line and clear working space (to be decided during detail engineering) is available between two streams of filtration, PRS, Metering etc. The distance between centre line of pipes of parallel streams shall be approx.1 mtr. Generally smaller skids shall have straight line configuration and bigger skids shall have U-Shape configuration. However, the same to be submitted during detailed engineering and got approved before proceeding for fabrication of skids.	Both the clauses are contradictory. Please clarify whether does you need 2 tier configuration or U shape configuration. During post order stage if configuration requirement changes, it will cause rework on GAD preparation and subsequent there is a delay in skid execution. You are requested to clarify type of arrangement required. Also provide the skid layout.	2 tier is preferable however in case of any requirement U shape may also required which depends on the location of skid installation, at present it is not known.
111	QEOC Vendor List, Page no. 752 & of 862 of 938, Clause no. 3.4.19 & AVL	As per clause no 3.4.19 standard specification for wet gas filter it has mentioned that QOC shall be of the makes M/s GD Engineering / PECOFACET and Additionally QOC of M/s Huber Yale / CYPRIS technologies /PEERLESS/ GRINELL/ Pipeline Engineering U.K./ Pipeline Technologies, France (Genoyer Group) makes may also be accepted . However on Pg No 862 it has provided detail vendor list for Quick Opening closure	We understand that we have to supply QEOC strictly as per the vendor list provided on Pg No. 862 of tender document and no other documents not be referred for QEOC vendor list. Please confirm our understanding is correct.	Tender condition prevails

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
112	PMS	As per PMS 150# & 300#, Flange size 1.5" belwo mentioned WN,. In 600# Flanges 1.5" belwo are sw only.	We understand that SW Flanges for 1.5" & below is acceptable for all presure ratings. Please confirm our understanding is correct.	Bidders understanding is correct
113	PMS & Datasheet for Ball Valve.	In PMS, Ball valve sizes belwo 1.5" mentioned flanged end, Where as in individual ball valve datasheet it is mentioend as SW.	We understand that all ball valve 1.5" & below shall be SW as per datasheet only. Please confirm our understanding is correct.	Bidders understandin is correct
114	BALL VALVE VENDOR LIST, Page no. 872 of 938, Clause no. 9	Ball valve vendor list Note	Since there are limited Indian vendros are available , hence Please confirm whether we sahl supply ball valve based on PTR as per note no 4 of pg no 872 given in the vendor list.	Tender condition prevails
115	Requirement of QEOC, Page no. 19 of 938, Clause no. 2.2.2 (b)	As per clause no 2.2.2 (b) The Filtration system with filter shell diameter more than 10" shall be installed with QOEC with davit arm, However the filtration system with shell diameter 10" and below are acceptable with blind covers with davit arm. However as per Pg No 431 of Filter Datasheet Note No 3 it has mentioend that QOEC with Davit arm for top/end cover opening to be provided as per requirement for shell/flange of 10" and above dia	Both the stagements mentioend in the bid are contradactory for 10" Shell Size. We understand that QOEC with Davit arm for top/end cover opening to be provided as per requirement for shell/flange of 12" and above dia and filtration system with shell diameter 10" and below are acceptable with blind covers with davit arm. Please confrim our understandign is correct.	Bidders understandin is correct
116	P&ID- Bypass valve Requirement fo FCV, Page no. 82 & 83 of 938	Bypass valve not shown for FCV in P&ID	Please confrim in FCV bypass we have to provide Ball & Globe Valve of same line size. Please confrim our understanding is correct.	Bidders understandin is correct
117	P&ID- Requirement of FCV, Page no. 93 of 938	FCV requirement	We understand that FCV is not required for SOR V. Please confrim our understanding is correct.	Bidders understandin is correct
118	Scope of work, Page no. 9 & 10 of 938, Clause no. 1.7 & Table-A	No of LEL Detector for SOR VI	In clause 1.7 it was mentioend as 6 nos where as in Table -A is mentioend as 3 Nos LEL detectors requored for SOR VI which is contardactory. Please confrim on final quantity of LEL detectors.	Please refer the reply to query No. 62.
119	Scope of work, Page no. 10 of 938, Clause no. Table-A	LEL Signal Conenction.	In SOR-I, II Filed Mouned FC is required and SOR-III & IC Filed & Panel Mounetd FC is required. Please confirm sicne filed mounetd FC is avaiable, we understand that LEL signal for SOR 1 to 4 shall be connected directly to the field mounted flow computer. Please confirm our understanding is correct.	LEL monitor is required where control room mounted flow meter is envisaged. Else LEL shall be feed to field mounted Flow computer.
120	LEL Monitor, Page no. 10 of 938, Clause no. 9.1	The LEL monitors shall be installed on a panel to be installed in control room. LEL group alarms shall be provided in DCS	We understand that LEL Monitor is required only for SOR VI where Panel Mounetd Flwo computer is required. For Rest SOR (I,II,III & IV) where Filed Mounetd FC is avaiable LEL Monitor is not requierd. Please confrim our understanding is correct.	Refer the reply to query No.73.

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
121	Pilto Heater, Page no. 164 of 938	Requirement of Pilot Heater	We understand that Pilot Heater is required for #600 rating skid where maximum Inlet presure is 90 kg/cm2 and minimum outlet presure is around 20 kg/cm2. For such high differential presure requirement, there is posibility of freezing the regulators sensing line which shall be eliminated by using Pilot Heater. Please confrim requirement of Pilot Heater fro SOR IV, V & VI which is #600 rating skid.	refer the reply to query No 85.
122	Scope fo Work-Common Vent Header, Page no. 22 of 938, Clause no. 2.2.2.15	A common vent header with flame arrestor along with flapper shall be provided.	Since skid is very big, it is not recommended to have common vent header along with flapper. You are requested to accept different vent header t venting point along with the flapper.	Tender condition prevails
123	TM G Rating in SOR-I & II -Table-A, Page no. 10 of 938	G1000 Meter is required as per Table-A.	We understand that as per Table-A, we need to supply G1000 rating of Turbine Meter. Please confrim our understanding is correct.	Bidders understanding is correct
124	Scope fo Work, Page no. 20 of 938, Clause no. 2.2.2.d	LTCS of all material shall be considered at downstream of Pressure regulator including PCV (Active and Monitor).	We understand that LTCS of all material shall be considered at downstream of Pressure regulator including PCV (Active and Monitor) only fro #600 rating skid SOR-IV,V & VI. Rest SOR-I,II & III, entire skid MOC shall be in Carbin Steel. All vent line valves shall be in LTCS Please confirm our understanding is correct.	Refer the reply to query No. 3 & 77.
125	Standard Specifcaiton for Turbine Meter, Page no. 339 of 938, Clause no. 1.1.2	EN-12261 Turbine Gas Meter	As per PNGRB Guideline- , it has mentioned that Turbine Meter shall comply " AGA Report No 7 Measurement of Gas by Turbine Gas Meters EN 12261- Gas Meter- Turbine Gas Meter" We udnerstand that as per PNGRB guideline Turbine Meter shall comply AGA 7 and EN 12261 standard. Bidder has to submit necessary type test report complying to both these stanadrd. Kindly confrim our understanding is correct.	Tender condition prevails
126	Specification of Field Mounted (Solar panel powered) Flow Computer, Page no. 44 of 938, Clause no. 6.3.17	NEMA-4 carbon steel enclosure with additional rain protection canopy/ shed is required	We understand that canopy is required only for Flow Computer.Please Confirm that out understanding is correct.	Canopy is required for all filed instruments only
127	Scope of Work & Supply (Project Specific), Page no. 22 of 938, Clause no. 2.2.2 (11)	Canopies for all Instruments, etc. are required. Shed/ Enclosure/ fencing/ rain protection for entire skids of smaller sizes. Shed/ Canopy for FC and all other instruments/ transmitters. Requirement of fencing/ enclosure for complete metering skid with top cover / rain protection.	We understat that canopy is not required for entire skid. However as per scope of supply , we understand that there is requirement of canopy. Requested to clarify exact requirement. If canopy is required then please note ,Since there are 4 streams of PRS and Metering, it is not possible to accommodate all the components in canopy. You are requested to remove the requirement of canopy.	Refer the reply to query no. 126

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
128	SOLAR Panel and Battery required for Field mounted Flow computers, Page no. 34 of 938, Clause no. 3.8.2	Battery for 30 no-sunny days requirement	Looking towards high power consumption of GPRS modem and flow computer, request GAIL to reduce no sunny days requirement from 30 days to 15 days	Tender condition prevails
129	SCOPE OF WORK, Page no. 9 and 79 of 938, Clause no. 1.2 and P&ID	Skid is to be provided with field and panel mounted flow computer SOR-III & IV	We understand that Field Mounetd FC and Control room mounted FC shall not in a operaiton at same time. We understand that initial stage filed mounted FC is in operaitona nd once control room is ready then it will switch to control room mounetd flow computer. Please confrim our udnerstanding is correct.	It may operate simultaneously.
130	SCOPE OF WORK, Page no. 13 of 938, Clause no. 2.2.1 g)	Mode of communication with Flow computers shall be decided during detailed engineering and the bidder shall provide required hardware for connectivity through any type of RTU port (Ethernet, RS232 or 485). For this purpose at least one no. of Ethernet port shall be provided in each flow computer, the rest of the ports can be RS232/485.	Please confirm that requirement of ethernet port is applicable for panel mounted flow computer only. Field mounted flow computers have RS232 or RS485 ports only and they will also comply the communication requirement. Please confirm acceptance.	Tender condition prevails
131	SCOPE OF WORK and P&ID, Page no. 30 of 938, Clause no. 3.7.6	3.7.6. For all the ball valve of size above 2" in the main lines (at upstream of filtration, pressure reduction and metering skids) the equalizing line with double block valves to be provided as per Typical P&ID. Equalizing valves are not required for ball valves up to 2" sizes. In the main lines of the skid all the ball valve (at upstream of filtration, pressure reduction and metering skids) of sizes 6" and above shall have the equalizing line with 2" size valves. All the main line ball valves of sizes 3" and 4" shall have equalizing line with valves of 1" size. In the equalizing lines first valve shall be ball valve and the second valve (of the block valve) shall be	We understand that we have to follow this clause and accordingly need to cosnider for respective skid wherever applicable. Please confirm our understanding.	bidders understanding is correct
132	SCOPE OF WORK and P&ID, Page no. 30 of 938, Clause no. 3.7.7	3.7.7. All the vent / drain lines shall have combination of first valve as Ball valve and second one as Globe/ plug valve. First Valve (Upstream valve) shall be Ball valve (welded type) and the second (Downstream) valve shall be Plug/ Globe valve (flanged). The Inlet side of Ball valve of Drain/ vent lines shall be welded type. All drains valves shall be provided with suitable Blind flange/ Plug. All the drain valves on the main lines shall be of ¾" size for main lines up to 4". All the drain valves on the main lines shall be of 1" size for main lines above 4". All the vent valves shall be of 1" size for main lines up to 6" and vent valves shall be of 2" size for main line sizes above 6". The second Isolation valves (Globe / plug valves) of all the vent lines shall be of LTCS (Low Temperature Carbon Steel) material.	We understand that we have to follow this clause and accordingly need to cosnider for respective skid wherever applicable. Please confirm our understanding.	bidders understanding is correct

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply
Technical Query				
133	SCOPE OF WORK, Page no. 34 of 938, Clause no. 3.8.4	SOLAR PANEL shall be suitable rating rechargeable battery mentioned above. Certification shall be provided for use of Solar panel in the Class-I, Div-II, Group C&D.	Please note that such certified solar panels of 100w to 150w are not available in India. At the same time as per scope of work clause 3.8.1(page 35 of 928), solar panel shall be installed at a distance of 10 meters from skid. This distance will be considered as safe area. Please accept solar panels used for safe area.	Tender condition prevails
134	SCOPE OF WORK, Page no. 79, 80, 81 of 938, Clause no. P&ID	TT for temperature measurement	Please note that field mounted flow computer can have direct RTD inputs. So separate temperature transmitters will not be required. That will also affect to better accuracy and lower power consumption of battery. Please confirm acceptance. TT shall be provided for temperature measurement to panel mounted flow computer.	Please refer the reply to query No. 51 & 52.
135	P&ID, Page no. 82 & 83	Requirement of PT at filter inlet & Outlet	We have observed that in USM skid (SOR-III, IV, VI), PT is installed at skid inlet and PT & TT is installed at skid outlet on common header where as in TM skids P&ID (SOR-I & II), it is not shown any requirement of PT at skid inlet and PT & TT at Filter outlet on common header. Please clarify whether for (SOR-I, II & V) 1. Does PT is required at Skid Inlet 2. Does PT & TT is required at filter outlet on common header.	refer the reply to query no 43
136		Supervisor System requirement	We understand that supervisory system is not required in any of the SOR. Please confirm our understanding is correct.	Bidders understanding is correct.
137		Laptop	We understand that laptop is required only for SOR VI. Please confirm our understanding is correct.	Laptop is required for SOR Item No, 3, 4 & 6
138		Print	We understand that printer is not required in any of the SOR. Please confirm our understanding is correct.	Bidders understanding is correct
139		Cable Distance	Please confirm from skid to control room does we need to supply cable in SOR III, IV & VI. If required please confirm the distance between skid and control room.	Please consider 200 Mtr cable length for supply with skid
140	P&ID, Page no. 83 of 938	Ball valve at inlet of PRS	In USM P&ID, ball valve at inlet of PRS is missing . Please confirm we need to supply ball valve at inlet of PRS and equalising valve is required for this ball valve as per the clause 3.7.6 (Pg No 30). Please confirm our understanding is correct.	Bidders understanding is correct
141	Process Parameter, Page no. 10 of 938	Table - A & SOR	Process parameter is different as mentioned in table-A of Pg No 10 of 928 and in SOR. We understand that we have to follow process parameter as mentioned on page no 10 of tender Table-A annexure. Please confirm our understanding is correct.	Bidders understanding is correct
142	PSV Datasheet, Page no. 416 of 938, Clause no. 10	Type of PSV as conventional Type for all SOR	We understand that PSV shall be conventional type for all the SOR skid as per the tender datasheet. Please confirm our understanding is correct.	Please refer the reply to query No. 91.

Reply to Pre Bid Queries (e-tender No. 8000017148)
ARC TENDER FOR PROCUREMENT OF METERING SKIDS FOR LAST MILE CONNECTIVITY
(PROCUREMENT OF METERING SKIDS)

SR. NO.	SECTION	DESCRIPTION	DETAILED QUERY	GAIL's Reply																															
Technical Query																																			
143		<table border="1"> <thead> <tr> <th>SOR Item No.</th> <th>Details of Metering Skids</th> <th>Inlet Outlet size of Skid</th> <th>Inlet Outlet pressure class rating of Skid</th> <th>Operating Pressure Range (in Kg/cm²g)</th> <th>* Spring range of PCV/SSV/CRV (in Kg/cm²)</th> <th>Max DPF allowed across skid (in Kg/cm²)</th> </tr> <tr> <th>(a)</th> <th>(b)</th> <th>(c)</th> <th>(d)</th> <th>(e)</th> <th>(f)</th> <th>(g)</th> <th>(h)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>0.11 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s), Field & Control Panel Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.</td> <td>3' x 6"</td> <td>300# / 150#</td> <td>20 to 49</td> <td>4 to 16</td> <td>0 to 49</td> <td>4</td> </tr> <tr> <td>2.</td> <td>0.2 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s) and Turbine Metering (1w+1s), Field Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.</td> <td>4' x 6"</td> <td>300# / 150#</td> <td>16 to 40</td> <td>7 to 16</td> <td>5 to 16</td> <td>5</td> </tr> </tbody> </table>	SOR Item No.	Details of Metering Skids	Inlet Outlet size of Skid	Inlet Outlet pressure class rating of Skid	Operating Pressure Range (in Kg/cm ² g)	* Spring range of PCV/SSV/CRV (in Kg/cm ²)	Max DPF allowed across skid (in Kg/cm ²)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	1.	0.11 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s), Field & Control Panel Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.	3' x 6"	300# / 150#	20 to 49	4 to 16	0 to 49	4	2.	0.2 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s) and Turbine Metering (1w+1s), Field Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.	4' x 6"	300# / 150#	16 to 40	7 to 16	5 to 16	5	tioned in column (g) is 0-49 kg/cm ² . since required 4 – 16 kg/cm ² and outlet design rating is of #150 so elected such that it should be suitable for range 4 – 16 derstand that spring range given 0 – 49 kg/cm ² is not clarify.	spring range of 4-16 kg/cm ² is required for SOR Item No.1
SOR Item No.	Details of Metering Skids	Inlet Outlet size of Skid	Inlet Outlet pressure class rating of Skid	Operating Pressure Range (in Kg/cm ² g)	* Spring range of PCV/SSV/CRV (in Kg/cm ²)	Max DPF allowed across skid (in Kg/cm ²)																													
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)																												
1.	0.11 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s), Field & Control Panel Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.	3' x 6"	300# / 150#	20 to 49	4 to 16	0 to 49	4																												
2.	0.2 MMSCMD capacity Turbine Metering skid with dry gas filtration(1w+1s), stream PRS(1w+1s) and Turbine Metering (1w+1s), Field Mounted FC with Solar Panel, Battery with Charger unit, 3 Nos. LEL Detectors and FCV.	4' x 6"	300# / 150#	16 to 40	7 to 16	5 to 16	5																												
144		Turbine Meter Wet calibration	We understand that meter shall be wet calibrated at average of maximum and minimum operating pressure. Kindly confirm.	bidder understanding is correct																															
145		EN 10204 Certification	We understand that 3.1 certification is required for all items and only documents shall be reviewed by TPI during final skid inspection. Kindly clarify.	tender condition prevails																															
146		PCV/FCV QAP	We request you to kindly remove hydro witnessed for PCV & FCV. TPI shall review documents during final skid inspection.	confirmed																															

Lyons Engineering Pvt. Ltd.



M Girish Kumar
General Manager - C & P