



INDRAPRASTHA GAS LIMITED
 IGL Bhawan, 4, Community Center,
 Sector-9, R.K. Puram, New Delhi - 110022

TENDER NO. IGL/ET2/CP/CP18517
SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FIELD REGULATING STATIONS (FRS)

REPLIES TO BIDDERS' QUERIES - 1

SR. NO.	SECTION/ PG. No.	Clause Reference	DESCRIPTION	BIDDER'S QUERY	IGL REPLY
1	Pg 10 of 266		Pt. 7.3 System Configuration	Request to kindly clarify whether analog O/P or digital O/P from GD shall be taken to FC. In case of digital O/P, specify the cutoff value for leak detector to consider for relay on-off operation.	Refer Clause 7.3 of Scope of Work and DATA SHEET - CONVERSION TYPE POINT GAS DETECTOR (Point No. 21) of Technical Volume
2	Pg 12 of 266		Scope Matrix	For 6000 & 9000 SCMH skids, as per OEM recommendation we propose to have 1X100% flow configuration for meters as such case would be cost effective with no implication in functionality. Request to kindly accept the same. In case of acceptance of the same, working stream shall have inlet-outlet isolation valves of size suitable to 100% flow capacity meter and bypass stream shall have valves and spool piece of size suitable to 50% flow capacity. Kindly confirm.	Tender Condition Prevails
3	Pg 59 of 266		PTS - Filtration and Regulating Skid	We understand that for 6000 & 9000 SCMH skids; metering to be designed 2x50%, so our understanding are that PRS outlet Ball Valve and common header after PRS stream shall be of capacity of 100% whereas metering spools after PRS include inlet Ball Valve, meter, meter outlet Ball Valve to be designed /sized for 50% flow capacity, later after outlet metering Ball Valve, common outlet header will be designed for 100% flow rate.	Bidder Understanding is Correct
4	Pg 60 of 266		Flow computer USM	As per tender technical clause, Flow computer shall be installed in explosion proof and weatherproof IP65 cabinet and shall be provided with Pre-fabricated FRP canopy (if installed outside skid enclosure) with required installation accessories. We request to kindly confirm whether Zone certification is mandatory for the flow computer or not.	Flow Computer shall be certified for IEC Zone 2 (or better)
5	Pg 61 of 266		Flow Computer	We understand that 1 no. AO shall be considered in FC for ordoriser controller. Also Ordoriser Controller shall not be in bidder's scope. Kindly confirm our understanding is correct.	Bidder Understanding is Correct
6	Pg 86 of 266		Flow computer Data sheet Notes 7*	As per FC datasheet, Flow computer shall have the facility to enter manually the gas composition and direct connectivity with on-line gas chromatograph. The system requires RS485 for entering gas composition, but the technical specifications also mention a LAN card. We understand that either RS485 or LAN card can be supplied for communication. Kindly confirm our understanding is correct.	Refer Clause 7.4 of Scope of Work in technical Volume Tender condition prevails
7	Pg 91 of 266 Technical Document		Data Sheet for Pressure Regulated Valves	We understand as the skid inlet pressure will vary considerably and in wide range (15 to 35 Bar G) as per the provided data. In such case the regulator design should be such that the inlet/upstream high pressure should not come in direct contact with the regulator main diaphragm as per Loading type regulator design. In otherwise case (unloading type), 1. If inlet pressure comes in direct contact with diaphragm it will affect performance due to hunting issues as regulator will be sensitive to inlet pressure variation also. This will increase the maintenance activity and will reduce life of diaphragm. Such regulator also have impact on the accuracy and lockup pressure of regulator. Hence, we request you to kindly accept the Loading type regulator only.	Tender Condition Prevails
8	Pg 98 of 266		Appendix 2 Process Parameters	We understand that for line sizing and regulator sizing, following process parameters needs to be considered: Min. Inlet pressure: 15 Barg (Design 49 Bar G) Max Temperature: 48 degC Max Flow: 2000/3000/6000/9000 SCMH Kindly confirm our understanding correct.	Line sizing to be done according to the operating parameters
9	Pg 98 of 266/ Pg 138 of 266		Appendix 2 Process Parameters/ Piping Specification - Pipes	As per process parameters, design temp. is -29-65 DegC. As per piping specifications on pg 138, LTCS MOC needs to be considered for pipes for given design temp. We request IGL to kindly confirm the MOC to consider for entire skid inclusive of pipes, valves, flange/fittings etc. Piping specifications for flange/fittings, valves etc. states MOC as Carbon Steel not LTCS. Also looking at the operating process parameters, LTCS material shall not be required. Even all datasheets are also with CS MOC. We request IGL to accept and confirm piping material including all MOC will be carbon steel.	Bidder to refer the Working temperature as per Appendix 2 of Technical Volume

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10	Pg 265 of 266		P&ID Sheet 7.notes	For SOLAR PANEL HEALTHINESS INDICATION SHALL BE SHOWN IN FLOW COMPUTER - We would like to inform you there is no such provision available to show the healthiness in Flow computer instead to achieve the same LED indicator with solar charger is provided with local indicator. Kindly accept the same.	Tender Condition Prevails
11	Pg 141 of 266/ Pg 155-158		Piping Specification - Ball Valves Datasheet for Ball Valve	As per piping specifications, gear operated BV are required for sizes 6" and above and for 2" to 4" wrench operated are required. However, as per BV datasheet pg 155-158, wrench operated are required for below 4" and gear operated for 4" and above. Kindly clarify for 4" valve, whether wrench operated or gear operated to consider.	For 2" to 4", wrench operated valves are required. Tender Condition Prevails
12	General		Certification	We understand that material certificates required for all buyout & skid etc. shall be EN10204 3.1 Kindly confirm.	Bidder understanding is correct. Refer clause No. 3.9 of PTS-FITTINGS AND FLANGES in Technical Volume. Tender Condition Prevails.
13	General		Mandatory Spares	We request to share mandatory spare list, if any, that is to be considered for the skids. Also confirm whether spares cost would be part of bid evaluation or not.	Refer Clause 8.17 of Scope of Work in Technical Volume. Contractor shall supply the necessary repair kit and consumables required as part of commissioning process with no cost to Owner Tender Condition Prevails
14	60 of 266	2.4 Flow Meter USM	2.4.1.4. - Flow computer shall be installed in explosion proof and weatherproof IP65 cabinet	As Flow Computer is Zone 2 approved, it is installed outside of skid canopy so explosion proof cabinet is not required, Please confirm	Explosion Proof cabinet is not required if the flow computer is zone-2 (or better) complied. The cabinet should be weather proof as per tender terms and conditions
15	60 of 266	2.4 Flow Meter USM	2.4.1.9. W&M Model Approval Certificate	We request IGL to please accept Declaration on letterhead for W&M Certificate as OEM's certification is under process for the same, we can submit documents in support of same (such as application number etc)	The bidder shall submit the W&M certificate during document approval after the tender is awarded. A declaration from the OEM confirming that the certificate is under process, along with supporting documents, must be provided. Additionally, the bidder must submit a declaration on its own letterhead stating that, if the W&M certificate is unavailable during QAP approval, USM from other makes mentioned in tender (Recommended vendor list) and are having valid certification, will be supplied
16	60 of 266	2.4 Flow Meter USM	2.4.1.10. - Provision for the updating the error curve (after calibration) should be there in the flow meter	Error curve is updated in flow computer as per standard practice, please accept	Tender Condition Prevails
17	68 of 266	2. Description of Supply	2.1.6. - Pressure regulators/ monitors shall have self-actuated pilot operated with regulation accuracy of better than +/- 1% of set point	We request IGL to only accept Loading Type Regulator with 1% AC Class & 2.5% SG Class with EN Type approval Certificate	Tender Condition Prevails
18	69 of 266	2. Description of Supply	Regulation accuracy of better than +/- 1% of set point.	It must be as EU Approve & Certificate is mandatory, please confirm	Accuracy should be mentioned in EU Certificate/Calibration Certificate from NABL (or equivalent) approved lab
19	87 of 266	Datasheet USM	Flow Profiler & Stright Run	We understand that it is based on OEM guideline so as per OEM guideline Flow Profiler & Stright Run is not required for particular requirement, kindly confirm	Bidder Understanding is Correct
20	139 of 266	Piping Specification	Piping Specification	All fittings below 2" should be socket weld type, please accept	Refer Note 10 of P&ID in Technial Volume
21	139 of 266	Piping Specification	Pipes	We understand that for 4" Pipe & fitting must have Schedule 80 as PNGRB Standards states that thickness of 4" must be 6.4 mm but 4" Sh 40 is comes with 6.02 mm as standard so please confirm	Bidder understanding is correct. Piping shall be provided as per PNGRB Standard
22	140 of 266	Piping Specification	Flanges	We request IGL to accept SORF/SWRF type flange below size of 2"	Refer Note 10 of P&ID in Technial Volume
23	141 of 266	Piping Specification	Ball Valve below 2"	SW with 100 mm pups on both side is CGD practice, please accept	Refer Note 10 of P&ID in Technial Volume
24	141 of 266	Piping Specification	Globe Valve below 2"	SW on both side is as per CGD Practice, Please accept	Refer Note 10 of P&ID in Technial Volume
25	153 of 266	Cartridge Filter Datasheet	Top Cover - With Quick opening closure as per ASME Sec VIII	It is not required for filters Size upto 8" size, Please confirm	Tender Condition Prevails
26	10 of 266	System Configuration	Process Parameter	We understand that we have to follow process parameter as per P&ID only kindly confirm	Refer Appendix-2 of Technical Volume
27				Please confirm whether an accuracy of 2.5% for the regulator is acceptable, as this is a standard practice followed by all CGD companies, including GAIL.	Tender Condition Prevails
28			Line Size Calculation	As per tender, gas velocity before filter shall be 20 m/s & 30 m/s after filter. During line sizing calculation of 9000 FRS gas velocity is going slightly above the set limit i.e. 30.16 m/s at 6" line size after regulation so clarify if bidder has to follow the limitations strictly as per tender specs or this slight deviation of +/-2% is acceptable. Kindly clarify.	Tender Condition Prevails
29	153 of 266 (Technical Volume)		Filter Shell Cover - QOC	As per standard practice in CGD, QOC are generally required for large shell size of 12" and above. For shell size below 12" davit arm is acceptable. Kindly confirm if our understanding is correct.	Tender Condition Prevails
30			USM straight run shall be as per AGA 9 (P&ID)	We understand that straight run shall be as per OEM standard because considering straight run as per AGA9 will increase the length of FRS. Kindly clarify.	Bidder Understanding is Correct

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31	153 of 266 (Technical Volume)		System Configuration - Dual stream (2 x 50% for 6000 & 9000 SCMH) Ultrasonic Flow meter (USM) type gas flow meter skid with pressure, temperature element, Flow Computer (FC) battery operated along with inbuilt or external GSM modem as per P&ID.	<p>We understand that complete section after interconnecting line 0108-NG-X"-1C1-N and upto next interconnecting line 0110-NG-X"-1C1-N as highlighted below shall be designed for 50% Flowrate and further section from NRV-0103 till outlet shall be at 100% Flowrate. Kindly confirm.</p>	Bidder Understanding is Correct
32			QAP-PT,TT,PCV,SSV,PSV,CRV	We understand that 3.1 certification is required for all the bought out items and TPI shall review the documents during final skid inspection. Kindly confirm if our understanding is correct.	Bidder understanding is correct. Refer clause No. 3.9 of PTS-FITTINGS AND FLANGES in Technical Volume
33			USM sizing - gas Velocity	We understand that gas velocity limitation through the USM shall be 20 m/s. kindly confirm.	Bidder understanding is correct. Refer clause No. 2.4.1.9 of PTS-FILTRATION & METERING SKID in Technical Volume
34			Mandatory spares	We understand that mandatory spares price needs not to be included in FRS price. Kindly confirm.	Refer Clause 8.17 of Scope of Work in Technical Volume. Contractor shall supply the necessary repair kit and consumables required as part of commissioning process with no cost to Owner
35				Request for Consideration of R S Instrumentation & Services make Cartridge Filter Assembly for Tender No. IGL/ET2/CP/CP18517	Bidder to refer Note 2 of recommended Vendor List as provided in the Tender document, wherein vendors outside the list can be accepted subjected to acceptance and approval of Past Track Record (of atleast 1 year) of the vendor by IGL. Bidder shall estimate at their own risk & cost, in case of non approval of proposed vendor, bidder shall strictly follow tender recommended vendor list.
36	91 of 266 of Vol II	Datasheet of Pressure Regulator	Radiography – Required	Radiography is required, we request you reconsider requirement of radiography	Tender Condition Prevails
37	91 of 266 of Vol II	Datasheet of Pressure Regulator	Accuracy – 1%	It is mentioned as 1%, we request you to kindly reconsider as 2.5%	Tender Condition Prevails
38	166 of 266 of Vol II	QAP	Hydrotest - Witness	As the whole skid is under 3.1 certification, we request you to kindly consider hydrotest as review point	Tender Condition Prevails
39	Pg 10 of 266	7.1		As per Tender, Dual stream (2 x 50% for 6000 & 9000 SCMH) Ultrasonic Flow meter (USM) type gas flow meter skid with pressure, temperature element, Flow Computer (FC) battery operated along with inbuilt or external GSM modem as per P&ID. We understand skid shall be design at 50% flowrate each stream. PI confirm.	As per the clause No. 7.1 of Scope of Work in Technical Volume, each metering stream shall be 2 x 50% for 6000 & 9000 SCMH
40	Pg 13 of 266	9.0		Supply, erection, installation & commissioning of 12/24 V DC solar power system along with solar cell, mounting pole, flame proof LED to illuminate skid area, 72 hrs battery backup with charger and interconnecting cable. Please confirm we have supply LED light along with skid. If yes please provide details – QTY, Watt & other details.	LED light to be provided for sufficient illumination in the complete skid area.
41		Filter Approval		Please provide us acceptances on Kimpex Make Filter DRS skid. We are approved in all CGD & also supplying to all CSD, GAIL Gas.	Bidder to refer Note 2 of recommended Vendor List as provided in the Tender document, wherein vendors outside the list can be accepted subjected to acceptance and approval of Past Track Record (of atleast 1 year) of the vendor by IGL. Bidder shall estimate at their own risk & cost, in case of non approval of proposed vendor, bidder shall strictly follow tender recommended vendor list.
42		2000 / 3000 SCMH		Flow rate is very low; we can replace with RPD meter in place USM meter.	Tender Condition Prevails
43		Gas Detector		Please confirm Gas Detector is required or not.	Refer Clause No. 7.3 of Scope of Work in Technical Volume
44		Ball Valve 300# & 150#		As per Datasheet from 4" and above all valve shall be TMBV &. Kindly note as per standard particles all CGD & EIL accept floating upto from 6". Please note lead time of TMBV is also very high. Kindly accept floating up to 6".	Tender Condition Prevails

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45				Please confirm that an accuracy of 2.5% for regulators is acceptable, as this is a standard practice followed by all CGD companies including GAIL.	Tender Condition Prevails
46	61 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer	Flow Computer shall have type approval for flow calculation (as per AGA-9) from the internationally accredited laboratory	We understand that bidder should submit gas custody transfer type approval certificate for offered field mounted flow computer(as per OEM manufacturing standard as a full unit) for latest AGA-7(2006) & AGA 8(2017) with detailed, Gross I & Gross II methods and latest, ISO 6976,GPA 2172, GPA2145, API 21.1 (latest version of standards shall be used) as per IGL requirement. Please confirm	Gas custody transfer type approval may be submitted by the bidder
47	86 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Technical datasheet	Standard: AGA8, AGA9, AGA10 (With ultrasonic flow meter)		
48	61 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer	Flow computer shall be installed in explosion proof and weatherproof IP65 cabinet	We understand that offered flow computer enclosure(as a complete full unit including flow computer electronics) itself shall be weather-proof and Hazardous area certified for installation in Hazardous area and not to be mounted inside Ex proof enclosure.	Explosion Proof cabinet is not required if the flow computer is zone-2 (or better) complied. The cabinet should be weather proof as per tender terms and conditions
49	61 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer	The software for Configuration of flow computer, Audit trail and history retrieval from flow computer shall be supplied by bidder	We understand that bidder shall conform standard API 21.1 : 2013 -"flow measurement using electronic metering systems and periodic logs for field mounted flow computer. Bidder to furnish certificate for the same	Tender Condition Prevails
50	86 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Technical datasheet	Note-9: Audit Trail & event log feature should be there		
51	61 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid	Hazardous area application certification, for the flow computer.	We understand that bidder shall provide Class 1 Division 1 and Class 1 Division 2 certificate(likewise CSA/UL/FM/ATEX/ IECEx/ CCOE/PESO) for complete field mounted flow computer electronics with built-in display and its enclosure as a single integrated unit as per OEM manufacturing standard only and not housed/assembled in Ex-proof JB	Flow computer as a whole unit including display, electronics etc. shall be certified for IEC Zone-2 (or better)
52	61 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid	Area classification shall be IEC Zone-1, Gas Gr. IIA & IIB, T3 and meter shall have Temperature Class T3. All electrical instruments in the field shall be suitable for the specified area classification and certified by a statutory body such as FM, UL, CENELEC, BASEEFA, and PTB etc	We understand that IGL has requirement for a single hazardous usage certificate for complete field mounted flow computer unit as per OEM manufacturing standard, where complete flow computer unit comprises of enclosure, electronics, built-in display, sensor, onboard/built-in I/O's : AI/AO/DI/DO/pulse/ RTD; comm ports : serial /ethernet ports - kindly confirm if our understanding is correct	Tender Condition Prevails
53	75 of 266	Tender document, Vol-II of II, PTS - Instrumentation for Package unit with Appendices, 3.7 Electronic Instrumentation in Hazardous Area	3. All electrical instruments to be installed in hazardous locations shall be certified to ATEX directives or other international agencies like PESO, CSA, UL, and FM.	We understand that bidder to provide International or Indian CCOE/PESO certificate for offered model of field mounted flow computer as a single full unit(flow computer with enclosure & inside electronics, integral sensor etc.) as per OEM manufacturing standard and not as an assembled products. Please confirm if our understanding is correct.	Bidder Understanding is correct
54	86 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer datasheet	The firmware of Flow Computer should support the following STANDARDS for flow calculation with type approval certificate : AGA8 (Detail, Gross I, Gross II), NX-19, ISO 12213, SGERG, GPA 2172(Gross heating values), ISO 6976(Net calorific value), API 11.1 temperature & pressure correction for crude oil /Natural Gas	As per PNGRB guidelines a custody transfer flow computer installed at each entry and exit point metering system should comply to volumetric as per AGA and API standards with gas components being determined by ISO 6976 - kindly confirm if this requirement is to be met with or not	Tender Condition Prevails
55	86 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer datasheet	Type : Microprocessor based	We request to M/s IGL to keep 32/64 bit or better microprocessor based field mounted flow computer as a latest technology trend.	Tender Condition Prevails
56	86 of 266	Tender document, Vol-II of II, PTS - Filtration & Regulating Skid, Flow computer datasheet		We understand that bidder to provide 10 years support letter for offered flow computer. Please accept & confirm	Tender Condition Prevails
57	Pg 265 of 266		P&ID Sheet	We understand that ball valves at PRS outlet (Tag no. BV-0125 and BV-0132) shall be of 300#. Valves after PRS outlet i.e. from metering inlet shall be of 150#. Kindly confirm our understanding is correct.	Piping Specifications has been mentioned in P&ID. Valves should be provided accordingly
58	pg 7 of 87 Commercial Document		GA location allotment	Kindly share location wise allotment of type of skids enable us to consider freight accordingly.	Shall be as per IGL requirement
59	pg 7 of 87 Commercial Document		Pt. 3.2 Delivery Schedule	Request to kindly share lot wise distribution for skid delivery.	Shall be as per IGL requirement
60	pg 7 of 87 Commercial Document		Pt. 3.2 Delivery Schedule	We request IGL to kindly accept delivery period of 24 weeks for lot 1 and 20 weeks for subsequent lots as delivery for most bought out items like meters, valves, FC itself take 16 weeks.	Tender Condition Prevails
61	pg 55 of 87 Commercial Document pt. 29.1			We request to kindly accept below mentioned PRS:	
62	pg 56 of 87 Commercial Document		Pt. 14 Price Reduction Schedule (PRS)	Price Reduction will be applicable @1/4% of the total order value (inclusive of taxes) per week of delay or part thereof in supply/completion/service of work subject to a maximum (ceiling) of 5% of undelivered order value (inclusive of taxes) for orders of goods, works and services.	Tender Condition Prevails
				For 10% payment release against ITC & FAT, we request IGL to accept following clause:	

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63			Pt. 15.4 Terms of Payment	In case Installation, Testing & Commissioning and Field Acceptance Test could not be executed within 03 months (instead of 12 months) from the date of receipt of skid at site/ store due to reasons attributable to Purchaser, above 10% payment shall be released on submission of CPBG of equivalent amount and undertaking by vendor for installation, Testing & Commissioning and Field Acceptance Test. The CPBG shall be valid for one year.	Tender Condition Prevails