



REPLY TO BIDDER'S PRE-BID QUERIES
TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas
TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
Commercial					
1	Clause No. 9.5 of IFB of Commercial Vol. I of II	Page No. 18 of 125	<p>EMD / BID SECURITY:</p> <p>PSUs and firms registered as Micro/Small Enterprise with MSME or NSIC are exempted from furnishing Earnest Money Deposit (EMD) / Bid Security, (subject to their enclosing a copy of latest and valid registration certificate for the tendered products/services) with their bid. Enterprise which have been re-classified as 'Medium' enterprise from their earlier status as 'Micro' or 'Small' enterprise in Udyam registration certificate shall be exempted from submitting EMD. The bidders shall be given this exemption for a period of three years from the date of such upward change in their MSME status. Bidders are required to submit Udyam registration certificate(s) meeting above stated conditions for exemption under this provision, failing which bid shall be rejected. Declaration as per Annexure-1 to be mandatorily submitted along with exemption certificate by such bidders. Traders / Dealers / Distributors / Stockist / Wholesalers are not entitled for exemption of Earnest Money Deposit (EMD) / Bid Security</p>	<p>Since we have been registered in Udyam (MSME) on 28.11.2020 as Medium Enterprises, please confirm if we will be exempted from submission of EMD as per above Notification (copy of Udyam attached for your ready reference).</p>	<p>Please go through the tender clause No. 9.5 and 9.6 of IFB of Commercial Vol. I of II.</p> <p>Medium category bidders are not exempt from submitting EMD. Further, any upward revision of micro/small bidders in their Udyam Registration may be considered as per clause.</p> <p>However, exemption with reference to erstwhile Udyog Aadhaar is not admissible.</p>
2	Clause No. 7.6 of IFB of Commercial Vol. I of II	Page No. 11 of 125	Bid Submission date and time	Further we also request you to kindly extend the bid submission date for a period of 10 working days from the date of receipt of reply to Pre-bid Query.	Refer Corrigendum-4, Dated-28.07.2023
3	Clause No. 7.6 of IFB of Commercial Vol. I of II	Page No. 11 of 125	Bid Submission date and time	You are therefore requested to extend time of submission of our offer till 12.07.2023.	Refer Corrigendum-4, Dated-28.07.2023
4	Clause No. 4.0 of IFB of Commercial Vol. I of II	Page No. 10 of 125	<p>DURATION AND DELIVERY SCHEDULE:</p> <p>The supply of Booster Compressor Package shall be made lot wise as follows;</p> <p>1st lot size of 10 Nos. Booster Compressor Package including all Auxiliaries, shall be delivered within 16 weeks from date of LOA. Subsequent lots will be placed as per requirement and each lot will be delivered within 12 weeks from the date of intimation. Time gap between lots to be of minimum 30 days.</p>	<p>We understand that lots are also splittable in 70/30 . For L1 - 7 quantity and for L2 - 3 quantity. kindly Confirm the same.</p>	<p>Bidder's understanding is correct for 1st lot. Subsequent lots will be placed as per requirement.</p>
5	SOR	Page No. 114 of 125	Not Quoted written in SOR	For Submission of unpriced SOR we request you to share us revised SOR.	<p>SOR given in Commercial Vol. I of II is for reference purpose only. Bidder to submit the Unpriced SOR mentioning "QUOTED" and GST %.</p> <p>Unpriced SOR excel sheet is available on e-wizard website https://petroleum.euniwizarde.com</p>



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6	-	-	General	We presume that state wages are applicable for Operation works	Refer Clause no. 32.6 of SCC (Tender conditions shall prevail)
Technical					
1	Technical volume II OF II	(PG 9 OF 261)	4. SCOPE OF SUPPLY & SERVICES: b) ExD type electrical and Instrument control panel complete with PLC based 10" HMI	HMI of 10" size is non-standard requirement in Booster packages. As per industry standard PLC based 7" HMI size is sufficient. Kindly accept the same.	7" and above HMI screen is acceptable. Refer to Corrigendum 5.
2	Technical volume II OF II	(PG 13 OF 261)	6. SPECIAL INSTRUCTIONS TO BIDDER: 6.6 The Supplier shall deliver a Certificate confirming to BS EN 10204 3.2 stating the quality, the mechanical properties, the chemical analysis, the process of manufacture and the making of the Booster compressor.	BS EN 10204 3.2 certification is not applicable. Bidder is having ISO 9001-2015 certification for manufacturing standards. Kindly confirm acceptance to the same.	ISO-9001 is not equivalent to EN 10204. Hence, tender condition shall prevail.
3	Technical volume II OF II	(PG 19 OF 261)	3. SCOPE OF SUPPLY Filtration at Suction and discharge to limit the oil carryover shall be provided	Filter is provided at suction as per OEM standard design. There is no operational requirement of another filter at discharge kindly exclude the same.	Tender condition shall prevail.
4	Technical volume II OF II	(PG 20 OF 261)	3. SCOPE OF SUPPLY CNG compressor shall have suction and discharge tubing arrangement is 3/4".	Please note connectors of 3/4" will be provided at priority panel edge/ Package outlet to match the desired tube sizing of the client.	Tender condition shall prevail.
5	Technical volume II OF II	(PG 20 OF 261)	3. SCOPE OF SUPPLY One no. relief valve at each stage discharge, first (1st) stage suction and Blow down Vessel.	There is no requirement of relief valve at the first stage suction for booster compressor, as the suction is always reducing from 220 to 30 bar, This clause is applicable for online reciprocating compressor	Noted and accepted
6	Technical volume II OF II	(PG 21 OF 261)	3. SCOPE OF SUPPLY Separate junction boxes shall be provided for instrument signal i.e. analog, digital, solenoids, RTD thermocouple, and power supply. Instrument junction boxes should not have any high voltage connection.	Local control panel (With PLC) is mounted on the package itself hence junction boxes are not required. Instruments will be directly wired to the Local control panel.	Junction boxes, wherever required, for power and instruments/control shall be separate. Power cables shall not be combined with instrument or control cables in one junction box.
7	Technical volume II OF II	(PG 21 OF 261)	3. SCOPE OF SUPPLY Main incoming cable from owners PDB to main control panel of the compressor (as per site requirement) through GI conduit/trenches, Cable from owner's electronic earth pit (EE) for electronic circuit in control panel, cable from owner's main earthing ring to control panel body earth and all interconnecting cables including complete erection accessories like double compression cable gland, cable tags, lugs etc. as required.	Please confirm length of cable to be considered	Length of the cable is already mentioned in MR cl. 4.0 , 1.1 (c) pg 7 of 259



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8	Technical volume II OF II	(PG 22 OF 261)	3. SCOPE OF SUPPLY Special tools and tackles along with Toolbox (List to be submitted with bid) Bidder may outsource auxiliaries' equipment from domestic market from reputed manufacturer approved by PURCHASER. However, the overall guarantee shall lie with the bidder.	It is bidders understanding that only list of tools and tackles to be submitted with bid. Since Comprehensive O&M is in scope of bidder so this toolbox shall be available in custody of suppliers service team	Bidder's understanding is correct.
9	Technical volume II OF II	(PG 22 OF 261)	4. SCOPE OF WORK 4.5 Bidder to submit sizing calculation of compressor canopy.	Please confirm wether provision for overhead mounting of cascade on compressor canopy need to considered by bidder. If yes then please confirm cascade capacity and weight	Not required.
10	Technical volume II OF II	(PG 30 OF 261)	9. OTHER CONDITIONS OF WORK a) UTILITIES Piping from air compressor to booster compressor shall be CS/MS seamless high pressure pipe of Schedule 40 of ½ inch dia. of appropriate length as per site condition, the fittings like elbows, Tees, Union, sockets should be of same schedule and capacity for installation in a high pressure system as per NFPA-12.	Air compressor tubing shall be of 1/4" size as Air pressure in Air line is low.	Tender condition shall prevail.
11	Technical volume II OF II	(PG 30 OF 261)	b) BATTERY LIMITS All customer interface connections, gas Inlet shall be brought out to the package edge and terminated with ¾ "OD SS-Tube. All customer interface connections (i.e. Gas inlet & gas outlet) shall be brought out to the package edge. Gas inlet shall be terminated in nozzles with isolation valves and gas outlet (priority panel outlet connection) shall be terminated through high pressure ¾" full flow ball valves with 3/4" end connectors.	Please note connectors of 3/4" will be provided at priority panel edge/ Package outlet to match the desired tube sizing of the client.	Vendor shall follow full specifications given in tender.
12	Technical volume II OF II	(PG 95 OF 261)	5. BASIC DESIGN CRITERIA OF COMPRESSOR 5.35 Gas Recovery system If required, the Contractor shall provide gas recovery system with gas recovery vessel. The gas recovery vessel shall be provided with pressure relief valve and necessary instrumentation to avoid cold flaring of gas. Gas recovery vessel shall be ASME/IBR code designed.	Gas Recovery system is not applicable on Booster Compressor packages. Kindly exclude from bidders scope of supply.	Gas recovery system shall be provided, as per OEM design, if required for smooth and safe operation.



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13	Technical volume II OF II	3.0	Impulse and pneumatic piping/Tubing for all valves, fittings as specified & required for mounting the instruments. Block and bleed valves to be provided for Pressure gauges and pressure Transmitters.	Bleed valve are larger in size which are installed in the large gas pipeline of online compressor. The pipeline of the daughter booster compressor is small and there is less space in it. Therefore we are using needle valve from last 20 years and giving satisfactory performance for more than 500 compressors supplied till date. Please confirm	Noted. Needle valve with bleed valve shall be provided, as a replacement to block and bleed valve.
14	Technical volume II OF II	3.0	One no. relief valve at each stage discharge, first (1st) stage suction and Blow Down Vessel.	As per our manufacturing standard, relief valve at 1st stage suction is not required because suction pressure is always reducing from 200 to 30 bar. However we confirm that any safety requirement will not be bypassed due to this. Please confirm.	Noted and accepted.
15	Technical volume II OF II	3.0	2 no. Coriolis type Mass Flow meter shall be provided 1 nos at the suction and 1 nos at the discharge of Compressor Package.	Essentially Flow Meter is required by all CGDs only at discharge line. Therefore we feel that additional flow meter at suction line is not required. It will just add a considerable cost of compressor package. Please confirm.	Tender condition shall prevail.
16	Technical volume II OF II	3.0	Main incoming cable from owners PDB to main control panel of the compressor (as per site requirement) through GI conduit/trenches, Cable from owner's electronic earth pit (EE) for electronic circuit in control panel, cable from owner's main earthing ring to control panel body earth and all interconnecting cables including complete erection accessories like double compression cable gland, cable tags, lugs etc. as required.	We will supply main incoming cable of 50 mtrs. only. Laying through GI conduit/trenches and any additional length of cable requirement shall be in the scope of M/s. IGL Limited. Please confirm.	Tender condition shall prevail.
17	Technical volume II OF II	5.29	The bidder shall carryout calibration of gas detectors and flame detectors every six months or earlier as per requirement or instruction of EIC of OWNER.	The bidder shall carryout calibration of GD & FD on yearly basis. Please confirm.	Tender condition shall prevail.
18	Technical volume II OF II	5.37	The power factor (PF) of the whole electrical system should not be below 0.95. Motor feeder shall be provided with energy meter, heavy duty switch, HRC link type with single phase presenter fuses, contractors (AC-3 Duty), bi-metal relay switch fuse unit, voltmeter, push buttons, earth leakage relays, indication lamps for start/stop/trip/Co2 system etc. Ammeters shall be provided for all motors above 3.7. KW rating.	Capacitor Bank is not required and it is not possible to provide this provision in flame proof compressor panel due to excess heat in capacitor bank. We request you to take capacitor bank in scope of IGL & install the same in PDB room if required.	PF of 0.95 is required to be maintained. Any additional equipment required (i.e. capacitor bank) shall be in bidder's scope.



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19	Technical volume II OF II	7.31	PLC shall be of modular in construction, rack for mounting cards, CPU, Input output cards, Power supply card, communication card. PLC CPU shall be Hot redundant (1W+1S) with auto switch over without manual intervene. Failure alarm of CPU shall be provided in HMI and same shall be repeated in PLC for remote monitoring.	Redundant PLC CPU is not required as auto switch-over is possible with normal PLC. It will also increase the cost, installation space & availability from supplier. Please confirm	Tender condition shall prevail.
20	Technical volume II OF II	RECOMMENDED VENDOR LIST	FLP Motors :-	Please add OME s.r.l Italy Motor as M/s Crompton Greaves has shut down the manufacturing and there is delivery and quality issue with M/s Bharat Bijlee we have started using OME s.r.l. Motors. OME s.r.l. Motor has been approved by SGL, MNGL, Indian Oil-Adani Gas and Green Gas. These motors have been approved by PESO.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items). Electrical components/instrument items shall be PESO approved.
			FLP Switch Gears :	Please add Shyaam and Kaysons Make FLP Switchgear as demand of DBC is very high. The same has also been approved by Indian Oil-Adani, MNGL, SGL and Green Gas. These Switchgear have been approved by PESO.	
			On Off ball/ needle valve for CNG application	Please add DK LOK make Valves. DK LOK is already approved in other CGD companies.	
			IR Gas detectors:	Please include Draeger make GD in approved vendor list. The same is already approved in other CGD companies.	
			Radiator/heat Exchanger	Please include ICL make radiator in approved vendor list. The same is already approved in other CGD companies.	
UV Flame detectors:	Please include Draeger make FD in approved vendor list. The same is already approved in other CGD companies.				



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			Air Compressor	Please include ICL make air compressor in approved vendor list. The same is already approved in other CGD companies.	
21	Technical volume II OF II	3. SCOPE OF SUPPLY	Hydraulic booster with lube oil system and cooling system as required.	Lubrication system not required for booster compressor, this clause is applicable for online reciprocating compressors	Applicable, if required (as mentioned in Tender)
22	Technical volume II OF II	3. SCOPE OF SUPPLY	Single stage filtration at suction & two stage filtration at discharge so as to limit oil carryover is to be provided.	Hydraulic intensifier is non lubricating type and oil does not come in contact with gas therefore discharge filter is not required	Tender condition shall prevail.
23	Technical volume II OF II	3. SCOPE OF SUPPLY	Differential pressure gauge shall be provided at suction and discharge for coalescer filter elements chocking situation.	Suction filter is particulate filter, does not require DPG	Tender condition shall prevail.
24	Technical volume II OF II	3. SCOPE OF SUPPLY	Block and bleed valves to be provided for Pressure gauges and pressure Transmitters.	* Kindly permit usage of needle valve for pressure gauges instead of block and bleed valve. * Isolation valve before pressure transmitter may compromises the safety of the system if the valve remain closed and PLC will read wrong values.	Noted. Needle valve with bleed valve shall be provided, as a replacement to block and bleed valve.
25	Technical volume II OF II	3. SCOPE OF SUPPLY	One no. relief valve at each stage discharge, first (1st) stage suction and Blow Down Vessel.	* Relief valve at suction is not required as suction pressure is always reducing, this clause is applicable for online compressors. *As both fist and second stages of the intensifier are designed for operating pressure of 250 bar and there is no isolation between the stages, relief valve at fist stage is not required.	Noted and accepted
26	Technical volume II OF II	9 a) UTILITIES	Bidder to provide Instrument air with an electric motor driven air compressor with a suitably sized receiver & Refrigerant type/desiccant type (with FLP Heater) air drier system. The instrumentation air shall also be used for CNG Dispensers. Hence the system to be designed considering the same.	Air compressor and the dryer is to be installed in safe area. Therefore FLP equipment's are not required.	Tender condition shall prevail.
27	Technical volume II OF II	9 a) UTILITIES	Piping from air compressor to booster compressor shall be CS/ MS seamless high pressure pipe of Schedule 40 of ½ inch dia. of appropriate length as per site condition	1/2" SS 304 tubing will be used between air compressor and CNG booster compressor	Noted and accepted.
28	Technical volume II OF II	9 a) UTILITIES	All cabling (supply & laying) from electrical room to booster compressor shall be in bidder's scope.	Kindly confirm the maximum distance between electric room and compressor installation for cable consideration.	Max. length may vary from station to station and cannot be confirmed at the stage. Bidder shall consider the variation based on existing station layouts. Kindly refer MR cl. 4.0 , 1.1 (c) pg 7 of 259
29	Technical volume II OF II	12. CHECKLIST: SCOPE OF SUPPLY	Two FLP Lamp shall be provided in the Enclosure.	No. of lights used will be based on required illumination and the size of the canopy.	Noted, min. 2 are required.



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30	Technical volume II OF II	PRESSURE GAUGE DATASHEET	Pressure gauge Dial Size 150 mm	Kindly permit 100 mm PG.	Noted. 63mm and above dial gauge size is acceptable for all gauges, as per cl. 7.4 of TS., pg 13 of 35.
31	Technical volume II OF II	DATA SHEET OF GAS DETECTOR	GAS DETECTOR CALIBRATION Must be inbuilt or else calibration device must be supplied along with GD at free of cost.	Gas detectors are calibrated every yearly with calibration gas by NABL approved agency, Kindly exclude calibration device from supply scope.	GD calibration is part of CAMC and shall be under bidder's scope.
32	Technical volume II OF II	DATA SHEET OF FLAME DETECTOR	FLAME DETECTOR CALIBRATION Must be inbuilt or else calibration device must be supplied along with FD at free of cost.	Flame detectors are tested every yearly with test lamp by NABL approved agency, Kindly exclude calibration device from supply scope	FD calibration is part of CAMC and shall be under bidder's scope.
33	Technical volume II OF II	5.37 Electrical System	Heavy duty on-load phase changeover should be provided for H.E motor.	On load phase change over is not required, system will generate alarm on phase reversal	Tender condition shall prevail.
34	Technical volume II OF II	5.37 Electrical System	The power factor (PF) of the whole electrical system should not be below 0.95	Kindly include power factor correction in client scope.	Tender condition shall prevail.
35	Technical volume II OF II	7.24	Redundant 230 V AC to 24 V DC power supply unit shall be provided with diode circuit for auto switch over	Kindly permit non redundant power supply	Tender condition shall prevail.
36	Technical volume II OF II	7.31	PLC CPU shall be redundant (1 W+1S) with auto switch over without manual intervene	* Non redundant CPU system will be sufficient as the booster compressor is an independent machine. Or we can provide one pre programmed CPU as spare and the same can be replaced immediately.	Tender condition shall prevail.
37	Technical volume II OF II	9. CARBON DIOXIDE (CO2) FLOODING SYSTEM	CO2 flooding system will consist of Min 2 nos. brand new CO2 cylinders of 45 Kg capacity each.	Considering the size of the canopy 2 nos of 22.5 kg CO2 cylinder are enough, kindly consider the same.	Tender condition shall prevail.
38	Technical volume II OF II	8.13 Painting & protection	Painting (Primer & Finish Coat) Following primer and finish coats to be applied on the canopy and all structural parts as a minimum:-	The canopy will be power coated instead of painting.	Noted, powder coating specs to be reviewed during detailed engineering.
39	Technical volume II OF II	16. PARAMETERS FOR SCADA	We want to monitor / control all parameters available on the PLC through SCADA system Also it should remotely operate from any location.	* The PLC will export the compressor parameters over MODBUS TCP/IP protocol. * The supply of any additional hardware or software required like IOT gateway, SIM card based internet to post data, cloud services, or SCADA will remain with client	Vendor has to provide the compressor parameters over MODBUS TCP/IP Protocol to communicate with IGL RTU/SCADA system. Rest, tender conditions shall prevail.
40	Technical volume II OF II	QUALITY ASSURANCE PLAN OF BOOSTER COMPRESSOR	Canopy structure Painting inspection at works, surface preparation to be inspected after cleaning and before application of first coat of primer	Fully assembled canopy will be offered for inspection during MRT,	QAP shall be reviewed during detailed engineering.



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41	Technical volume II OF II	QUALITY ASSURANCE PLAN OF BOOSTER COMPRESSOR	QUALITY ASSURANCE PLAN OF BOOSTER COMPRESSOR	The QAP mentioned in tender is general, the detailed QAP will be offered for approval during detailed engineering	QAP shall be reviewed during detailed engineering.
42	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Pressure Gauges & temperature Gauges	* ASCHCROFT is now Precision Mass * Kindly approve M/s AN Instruments & M/s Altop	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
43	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	FLP Switch gear	Kindly approve, M/s Saai Electrica, M/s Shyam Switch Gear These makes are PESO approved	
44	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	RTDs	Kindly Approve M/s Altop	
45	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Needle Valve	Kindly approve M/s Baumer make needle valve	
46	Technical volume II OF II	Technical Volume Clause No.13.2	Energy Consumption quoted by the bidder under guaranteed parameters shall lie within the range of 30 to 34 KWH. No benefit will be given below 30 KWH & in case the energy consumption quoted by the bidder exceeds the upper limit i.e. 34 KWH, the bid will be rejected.	Considering the executed packages by the Bidder, we bring to your notice that Power Consumption is a major OPEX cost for long term. As such, we request to remove the lower limit of 30 KWH for Power Loading as it will give the End user the advantage for low power consumption and thus saving substantial amount in energy consumption over the complete Operation and Maintenance Period and reducing carbon emission for green environment. Also Major CGD Clients such as GGL, MGL, Avantika Gas, etc have included Power Loading for Bid Evaluation and suitable benefits are giving to the Packager for their energy efficient Packages. As such, request to consider Power Loading as a part of tender without the limit of 30 KWH.	
47	Technical volume II OF II	Technical Volume Clause No.3	Filtration at Suction and discharge to limit the oil carryover shall be provided	The gas available at the Booster Compressor Package is already filtered in the Online Compressor Package at its Suction and Discharge and also filtered at the Suction Filter of the Booster Compressor Package. As such, Bidder shall provide suitable Gas Filter at the Suction for filtration of the Gas and is enough for the operation of the system. Bidder has supplied substantial packages with similar configuration and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same	Tender condition shall prevail.



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48	Technical volume II OF II	Technical Volume Clause No.3	Differential pressure gauge shall be provided at suction and discharge to check filter elements chocking situation.	The glass based DP Gauge connected with 4 nut ferrules is a weak link considering the rest of the filter being heavy and bulky. This can lead to potential leak zone during handling and installation activities since there are a number of threaded / ferrule joints in a small weak area. Further we believe that the DP Gauge is not adding much a value since life of the filter element is guaranteed to be one year and the filter element can be replaced during periodic maintenance, once a year. The filter element has very high margin for dust holding and will not choke before one year. Bidder has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. We sincerely request you to consider elimination of DP Gauge from the Filter. Request to confirm the same.	Tender condition shall prevail.
49	Technical volume II OF II	Technical Volume Clause No.3	Instrumentation and control system as specified on data sheets, P&ID including Local panel, Console/Local gauge boards, PLC.	Field Mounted Instruments are provided with easy visibility as per OEM design, as such no gauge panel is required. The readings from the transmitters mounted along with indicators shall show the necessary readings on HMI without opening package. Request to confirm the same.	Tender condition shall prevail.
50	Technical volume II OF II	Technical Volume Clause No.3	4 no's Emergency stop button (push type & lockable) along with one hooter in office/ customer interface room and one hooter on package body.	Bidder understand that Hooter installed in Office/Customer room shall be non-flip type. Request to confirm the same.	Noted.
51	Technical volume II OF II	Technical Volume Clause No.3	CNG compressor shall have suction and discharge tubing arrangement is ¾". It is mandatory.	As per OEM recommendations and pressure drop calculation of the Package, 1/2" OD tubing are suitable for the Discharge Tubing after 2nd Stage. Bidder has supplied substantial packages with similar configuration and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same.	Tender condition shall prevail.
52	Technical volume II OF II	Technical Volume Clause No.3	Block and bleed valves to be provided for Pressure gauges and pressure Transmitters.	Hydraulic Booster Compressor Package is compact in size with limited tubing as compared to the online compressor package. Therefore, no separate Block and Bleed Valve shall be required for Pressure Gauges and Pressure Transmitters as Venting Provision is provided in case of maintenance purpose. Also using the Block Valves with Pressure Transmitter will put the entire system at higher risk considering Automatic Package Operation, as human interference is involved. Please confirm.	Needle valve with bleed valve shall be provided, as a replacement to block and bleed valve.



REPLY TO BIDDER'S PRE-BID QUERIES
TENDER FOR PROCUREMENT OF 550 SCMh CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas
TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
53	Technical volume II OF II	Technical Volume Clause No.3 DATA SHEET OF 550 SCMh CNG BOOSTER COMPRESSOR 18. C	One no. relief valve at each stage discharge, first (1st) stage suction and Blow down Vessel. Pressure Relief Valve at suction to compressor Required	We will provide 2 no's of SRV at 1st stage & 2nd stage discharge respectively. Our compressor's standard design comes with Relief valve at discharge of each stage. i.e. we provide 2 Relief Valves. However, Booster compressor will have 2 source of supply of CNG, 1 from LCV cascade & 1 from Stationary cascade and both the cascades are having 3 SRVs in each banks. i.e. total 6 SRVs are there on supply of CNG. SRV at the suction is not necessary as at suction pressure do not cross 210 bar and is always reducing and if it does, the compressor will not start due to start permissive logic. Request to confirm the same.	Noted and accepted
54	Technical volume II OF II	Technical Volume Clause No.3	Common CO2 extinguishing system consisting of two cylinders, piping, valves, cables and both cylinders having automatic as well as manual control systems with online weight loss monitoring, CHS/ CHS(A) hanging weighing scale & health status of CO2.	Limit Switches are provided on individual CO2 Cylinder to ascertain if the CO2 Cylinder is healthy or not prior to starting of the Compressor. Also Pressure Switch is provided for the CO2 Flooding System. Bidder will provide mechanical weighing gauge to measure the weight of co2 cylinder and online arrangement to check the healthy status of co2 cylinder. When cylinder gets empty alarm will appear as "CO2 CYL. 1 EMPTY". And during the flooding of CO2 "CO2 FLOODING" display caption will show in HMI. As such, no separate Online Weight Loss Indication device is required for CO2 System. Request to confirm the same.	Noted.
55	Technical volume II OF II	Technical Volume Clause No.3	For metering of natural gas, 2 no. Coriolis type Mass Flow meter shall be provided 1 Nos. at the suction and 1 Nos. at the discharge of Compressor Package.	2 Nos. Mass Flow Meter is required to be installed in Online Compressor to calculate package gas loss. Since there is no package gas loss in Booster Compressor being compact in size and reduced tubing. we feel that additional flow meter at discharge line is not required as per OEM Design. It will just add a considerable cost of compressor's package and O&M cost. Request to confirm the same	Tender condition shall prevail.
56	Technical volume II OF II	Technical Volume Clause No.7 DATA SHEET OF 550 SCMh CNG BOOSTER COMPRESSOR	API – 618/API 11 P Design code API 618, API-11P 2nd edition, ISO 16923, ISO 12213-2 (2006)	The API 618 compression systems are engineered and offered directly by GE's Oil & Gas business, while high-speed API 11P units are available through a network of authorized packagers and distributors that provide complete cost-effective compression packages including a driver. As such, Booster Packages Compressor are hydraulically driven Intensifiers and same shall be designed as per Manufacturer's Standard. Request to confirm the same.	Bidder shall submit relevant documents i.e. P&ID's, G.A.D.s, datasheets, calculations etc., as per OEM design, fulfilling tender requirements, process parameters, operational parameters, efficiency and gas loss parameters etc., during detailed engineering. Same shall be reviewed accordingly.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCM CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
57	Technical volume II OF II	Clause No.7	API – 661: Specifications for Air cooled exchangers	API-661 Code is applicable for Air Cooled Heat Exchanger for Online Compressor and Process Gas Packages. Considering the compact nature of the Booster Package and Variable Inlet Pressure design, Air Cooled Heat Exchangers shall be as per Manufacturer's Standard. Air Cooled Exchangers manufactured as per API-661 will not be able to be assembled within Package Footprint size as mentioned in the Tender. Bidder has supplied substantial package with similar configuration to major CGD Clients and has been in successful operation to complete satisfaction of the End users. Request IGL to confirm the same.	Bidder shall submit relevant documents i.e. P&ID's, G.A.D.s, datasheets, calculations etc., as per OEM design, fulfilling tender requirements, process parameters, operational parameters, efficiency and gas loss parameters etc., during detailed engineering. Same shall be reviewed accordingly.
58	Technical volume II OF II	Clause No.7	SAE J 514-Standard for CNG hydraulic tube fittings and O-ring	SAE J 514 Standard shall only be applicable for Flange and O-ring design of Hydraulic Intensifier and Hydraulic Pump. Other Hydraulic Instruments shall be as Manufacturer's Standard for Safety and Operation of the Package as per OEM Design. Bidder has supplied substantial package with similar configuration to major CGD Clients and has been in successful operation to complete satisfaction of the End users. Request to confirm the same	Bidder shall submit relevant documents i.e. P&ID's, G.A.D.s, datasheets, calculations etc., as per OEM design, fulfilling tender requirements, process parameters, operational parameters, efficiency and gas loss parameters etc., during detailed engineering. Same shall be reviewed accordingly.
59	Technical volume II OF II	Technical Volume Clause No.9 a	Piping from air compressor to booster compressor shall be CS/MS seamless high pressure pipe of Schedule 40 of ½ inch dia. of appropriate length as per site condition, the fittings like elbows, Tees, Union, sockets should be of same schedule and capacity for installation in a high pressure system as per NFPA-12. Distance between booster compressor and air compressor will be as per approved PESO drawing for each site, so piping and accessories to be supplied and installed accordingly by vendor as per OWNER's instructions	1. Bidder request to clarify whether alternatively for Air Compressor Tubing 1/2" SS Tubing can be provided along with double ferrule joints instead of mentioned 1/2" CS/MS pipes. 2. Bidder understands that Air Compressor and Piping cannot be designed as per NFPA-12, as the later is applicable Standard which contains requirements for carbon dioxide fire-extinguishing systems to help ensure that such equipment will function as intended throughout its life. Request to confirm the same, 3. Request to share tentative distance between Air Compressor and Package for estimation purpose.	1. Noted and accepted. 2. Bidder documents will be reviewed during detailed engineering, after the award. 3. Bidder shall estimate the same based on PESO guidelines, past experience and typical station layout.
60	Technical volume II OF II	Technical Volume Clause No.9 b	All customer interface connections (i.e. Gas inlet & gas outlet) shall be brought out to the package edge. Gas inlet shall be terminated in nozzles with isolation valves and gas outlet (priority panel outlet connection) shall be terminated through high pressure ¾" full flow ball valves with 3/4" end connectors.	As the outlet of the package in priority panel is divided into 6 lines, line size of 1/2" is enough to maintain the required gas velocity and flow. Also same is suggested by the Intensifier OEM with the second stage outlet connection port. So, Bidder suggests to provide package termination of 1/2" full flow Ball Valves with 1/2" x 3/4" end connectors for each cascade line. Request to confirm the same.	Noted, the outlet shall be 3/4" end connector.
61	Technical volume II OF II	Technical Volume Clause No.9 a	All cabling (supply & laying) from electrical room to booster compressor shall be in bidder's scope.	Request to share tentative distance between Electrical Room and Booster Compressor for estimation purpose.	Approx. cable lengths are mentioned in the tender specifications, SOR and MR (pg. 7 of 259)



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
62	Technical volume II OF II	Technical Volume Clause No.9 a	Surge protection devices of Schneider/MTL/Phoenix make shall be provided in the control panel.	SMPS considered are enabled with inbuilt surge protection of Make Omron. Bidder has supplied substantial package with same configuration and is acceptable across all CGD Industries. Request to confirm the same.	Tender condition shall prevail.
63	Technical volume II OF II	Technical Volume Clause No.12.3)	One LEL, one fire detector and Two FLP Lamp shall be provided in the Enclosure.	Booster Compressor Package are having very small footprint compared to online Packages. Also all the critical components are readily accessible from outside the Package. As such, Bidder suggests that one FLP Lamp is more than sufficient for complete illumination of the Package. Also it is difficult for two FLP Lamp at the ceiling of the Canopy also has CO2 and Vent Piping connected considering compact Booster Package. Bidder has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same.	Tender condition shall prevail.
64	Technical volume II OF II	PRESSURE GAUGE DATASHEET	Dial Size 150 mm PG shall be Direct-mounting type having element of bourdon tube and dial size of minimum 63 mm.	Client has mentioned PG dial size of 150mm in the datasheet and subsequently minimum dial size of 63mm is mentioned in the scope of supply. Bidder requests to clear the ambiguity as 63mm dial size is more than sufficient for easy visibility and access considering compact size of the Booster Package. Also the Bidder has standardized 63mm dial size Pressure Gauges and has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Request to clarify the same.	Noted. 63mm and above dial gauge size is acceptable for all gauges, as per cl. 7.4 of TS., pg 13 of 35.
65	Technical volume II OF II	SAFETY-RELIEF VALVE DATASHEET	Design code ASME sec. VIII & XIII	SRV Sizing shall be as per API-520 and its design code shall be ASME Sec VIII. Request to confirm the same.	Noted.
66	Technical volume II OF II	DATA SHEET OF GAS DETECTOR	Type Infrared sensor with Transmitter, with Local Display or Indicator	Gas detector shall be without local display or indicator, but the parameters shall be available on HMI display. Request to confirm the same	GD shall have local display/indicator to know the health/status of instruments locally and parameters shall also be available on HMI / PLC Display.
67	Technical volume II OF II	DATA SHEET OF GAS DETECTOR	WARRANTY 4 year warranty against sensor and electronics for the supplied product.	Bidder confirms standard warranty of 12 months from the date of commissioning or 18 months from the date of supply, whichever is earlier. Request to confirm the same.	Noted and accepted. However, repair/replacement shall be in bidder's scope during CAMC period of 4 years after warranty period.
68	Technical volume II OF II	DATA SHEET OF GAS DETECTOR	GAS DETECTOR CALIBRATION Must be inbuilt or else calibration device must be supplied along with GD at free of cost.	Calibration of GD is required only in 6 months or 1 year and same shall be complied by Bidder and no additional Calibration equipment shall be supplied along with equipment as it is not for regular or daily use. Request to confirm the same	GD calibration is part of CAMC and shall be under bidder's scope. Calibration of GD shall be done in every 6 months or instructions by EIC.
69	Technical volume II OF II	DATA SHEET OF FLAME DETECTOR	WARRANTY Four year warranty against sensor and electronics for the supplied product.	Bidder confirms standard warranty of 12 months from the date of commissioning or 18 months from the date of supply, whichever is earlier. Request to confirm the same.	Noted and accepted. However, repair/replacement shall be in bidder's scope during CAMC period of 4 years after warranty period.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
70	Technical volume II OF II	DATA SHEET OF FLAME DETECTOR	FLAME DETECTOR CALIBRATION Must be inbuilt or else calibration device must be supplied along with FD at free of cost.	Calibration of FD is required only in 6 months or 1 year and same shall be complied by Bidder and no additional Calibration equipment shall be supplied along with equipment as it is not for regular or daily use. Request to confirm the same	FD calibration is part of CAMC and shall be under bidder's scope. Calibration of FD shall be done in every 6 months or instructions by EIC.
71	Technical volume II OF II	SUPER FINE FILTER (COALESCING FILTER)	CE mark in accordance with European Directive for Pressure Equipment, PED (97 / 23 / EC) Are designed to meet the ATEX European Directive for Explosion Protection, (94 / 9 / EC) All natural gas filters in accordance to CE Eex 2GD IIB T6.	Discharge Filter shall be in accordance with Manufacturer Standard as it is proprietary design to meet the safety and operating conditions of the Package. Request to confirm the same	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items). Electrical components/instrument items shall be PESO approved.
72	Technical volume II OF II	DATA SHEET FOR ELECTRIC MOTOR	Space Heater Supply If Required	Space Heater is not required as Booster Compressor is intermittently operating Package and as per OEM design suitable Air Flow is maintained inside the Acoustic Enclosure avoiding the need for Space Heater for Motor. Request to confirm the same	Noted.
73	Technical volume II OF II	DATA SHEET FOR ELECTRIC MOTOR	Anti-condensation Heaters Yes	Anti-Condensation is not required as Booster Compressor is intermittently operating Package and as per OEM design suitable Air Flow is maintained inside the Acoustic Enclosure avoiding the need for Anti-Condensation Heater for Motor. Request to confirm the same.	Noted.
74	Technical volume II OF II	DATA SHEET FOR TEMPERATURE GAUGE	Connection location Bottom	Considering Guage Panel Mounted Temperature Gauge with capillary tube, it is not convenient for bottom entry connection as it would foul with the gauge below and over it. As such, Bidder requests to confirm for Back Entry Temperature Gauge connection.	To be reviewed during detailed engineering after submission of all documents, P&IDs, GADs, etc. after award.
75	Technical volume II OF II	DATA SHEET FOR TEMPERATURE GAUGE	Instrument connection 1/2" BSP(F)	As per IS, BSP connection and fittings are not used in Gas Circuit considering safety of Package operation with such high pressures. Also the Bidder has standardized 1/2" NPTM Connection Temperature Gauges and has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Request to clarify the same.	To be reviewed during detailed engineering after submission of all documents, P&IDs, GADs, etc. after award.
76	Technical volume II OF II	Technical Volume Clause No.5.24	End connections shall be 3/4" size pipe OD.	As per OEM recommendations and pressure drop calculation 1/2" OD tubes are suitable for the Priority Panel. However, we can provide expander at the package edge so as connect 3/4" OD SS tube. Request to confirm the same.	Noted, the outlet shall be 3/4" end connector.
77	Technical volume II OF II	Technical Volume Clause No.5.37	The power factor (PF) of the whole electrical system should not be below 0.95.	As the Booster Compressor Package is having Inductive Load, Power Factor can be in the range of 0.8-0.9 which can be corrected to better than 0.95 using Automatic Power Factor Corrector (APFC) Panel. Request to confirm the the scope of any equipment required for maintaining PF at 0.95 such as APFC Panel in Client scope.	Tender condition shall prevail.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
78	Technical volume II OF II	Technical Volume Clause No.7.4	PG shall be Direct-mounting type having element of bourdon tube and dial size of minimum 63 mm. It shall have shatterproof glass. Connection shall be 1/2" NPT (M) from bottom. Enclosure shall be weatherproof to IP65. Protection shall be 130% over range. Accuracy shall be ±1% of FSD. PG shall have blown out disc facility. For higher pressure applications (above 60 Bar), it shall be solid front type. Pressure gauge dial shall be white, non-rusting plastic with black figures. The dial face shall be marked with pressure element material. Pointers shall have micrometre adjustment. Pressure gauge sensing element shall be of SS 316 and moving elements of SS 304, as a minimum.	The standard port size for Pressure Gauge as per JIS and European Design Standard for Hydraulic Valves used in the Booster Compressor Package is 1/4" BSP. Please note that 1/4" connection is even allowed for pressure up to 400 bar, whereas for CNG application the pressure is limited to 250 bar. Moreover the instrument manifold is standardized by us which is compatible to 1/4" BSP. We propose to provide 63mm dial size with 1/4" BSP threaded Pressure Gauge. Moreover it is standardized in all booster packages and also having better availability. Please confirm.	To be reviewed during detailed engineering after submission of all documents, P&IDs, GADs, etc. after award.
79	Technical volume II OF II	7.3 PLC SPECIFICATIONS	PLC CPU shall be Hot redundant (1W+1S) with auto switch over without manual intervene.	Redundant PLC is required only for Continuous operation Online and Process gas Packages to avoid Plant Operation Hamper. However, as Booster Compressor Package is intermittently operated and the changing of PLC hardware is just a 10-15 mins process, Redundancy in PLC is not required. However, as per Tender requirement redundancy for Power Supply for PLC shall be provided. Request to confirm the same	Tender condition shall prevail.
80	Technical volume II OF II	7.3 PLC SPECIFICATIONS	All the parameters shall be time stamped in PLC. It shall be possible to synchronize PLC clock with GPS system.	Time stamping shall be in HMI. Request to confirm the same.	Tender condition shall prevail.
81	Technical volume II OF II	7.3 PLC SPECIFICATIONS	PLC shall have 20% spare each type of input output channels for future use.	20% spare philosophy can be followed from total no. of I/O's as the FLP panel is designed with a definite space.	Tender condition shall prevail.
82	Technical volume II OF II	Technical Volume Clause No.7.47 a)	Pressure transmitter and pressure gauge at suction, 1st & 2nd stg. discharge, cascade Low, Med, and High bank. Distribution header.	We provide pressure transmitters in suction line. Also a Pressure Gauge is available at the LCV post in suction of the package. So gauge is not recommended at the suction of the package, as the same readings are also available in the HMI as Pressure Transmitter is provided at the Suction with suitable alarm and trip. Please confirm.	Tender condition shall prevail.
83	Technical volume II OF II	Technical Volume Clause No.7.47 d)	Pressure gauge & temperature gauge at each stage of compressor.	Temperature Transmitter is provided at the second stage final discharge of the package to monitor the outlet temperature with suitable interlocks. Booster Package being compact, it won't be easily accessible. As such, Temperature gauge is not recommended at each stage as it increase maintenance of the instruments with no additional value to the package performance. Please confirm.	Tender condition shall prevail.
84	Technical volume II OF II	Technical Volume Clause No.7.47 e)	Temperature transmitter at each discharge stage.	Temperature Transmitter is provided only at the final discharge of Booster Compressor Package to monitor the outlet temperature of the Package to maintain outlet tender parameters. Any rise in temperature in Gas interstage is detected by Temperature Transmitter in Oil reservoir as single cylinder is used for Oil and Gas. Please confirm the same.	Tender condition shall prevail.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCM CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

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Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

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Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
85	Technical volume II OF II	Technical Volume Clause No.7.47 q)	Hydraulic oil cooler inlet & outlet temperature gauge.	As per Bidder's Design, Temperature Transmitter is provided at the final discharge of the Gas Circuit. Any rise in intermediate stage of compressor can be monitored by temperature transmitter provided in Hydraulic Circuit. As such, no temperature gauge is required for Oil Cooler. Bidder has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same	Tender condition shall prevail.
86	Technical volume II OF II	Technical Volume Clause No.7.47 r)	Hydraulic oil pressures on local gauge panel.	As per Bidder's Design, Temperature Transmitter is provided at the final discharge of the Gas Circuit. Any rise in intermediate stage of compressor can be monitored by temperature transmitter provided in Hydraulic Circuit. As such, no temperature indicator is required for Oil Cooler. Bidder has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same	Tender condition shall prevail.
87	Technical volume II OF II	Technical Volume Clause No.7.47 s)	Air compressor discharge pressure transmitter.	The Pressure Switch is provided to control the operation of Air Compressor as per the OEM design. Bidder has supplied substantial packages with similar configuration to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction. Please confirm.	Tender condition shall prevail.
88	Technical volume II OF II	Technical Volume Clause No.7.48 s)	Pressure switch at final discharge.	Bidder already provided Pressure Transmitter with suitable interlock and Pressure Gauge for manual visibility at final discharge. Also Safety Relief Valve is provided for the safety of Package. As such, Pressure Switch is not required at final discharge and Bidder has supplied substantial Package with similar configuration with complete client satisfaction. Please confirm the same.	Tender condition shall prevail.
89	Technical volume II OF II	Technical Volume Clause No.7.6	ESD button (4 Nos.) shall be provided.	Bidder confirms to supply ESD button (3 Nos.) shall be provided (Control Room, Process Area, one side of compressor). Bidder has supplied substantial Package with similar configuration with complete client satisfaction. Request to confirm the same.	Tender condition shall prevail.
90	Technical volume II OF II	Technical Volume Clause No.7.7	Fire resistance type for Fire detection fire detection system, ESD service, instruments used for ESD purpose, and ESD push buttons.	As per standard CGD practice, we shall provide FRLS cable for FD, GD and ESD. Bidder has supplied substantial packages with similar cables to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	Tender condition shall prevail.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

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Owner: Indraprastha Gas Ltd.

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Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
91	Technical volume II OF II	Technical Volume Clause No.8 h)	Relief valves shall be provided at suction and discharge and each inter stages of compressor with setting as per cl.7.20.4 of API-618 with R.V. venting as per cl. 7.20.4 of API-618. All vents shall be connected to common relief valve header	1)We will provide 2 no's of SRV at 1st stage & 2nd stage discharge respectively. Our compressor's standard design comes with Relief valve at discharge of each stage. i.e. we provide 2 Relief Valves. However, Booster compressor will have 2 source of supply of CNG, 1 from LCV cascade & 1 from Stationary cascade and both the cascades are having 3 SRVs in each banks. i.e. total 6 SRVs are there on supply of CNG. SRV at the suction is not necessary as at suction pressure do not cross 200 bar and if it does, the compressor will not start due to start permissive logic. Request to confirm the same. 2) SRV Sizing shall be as per API-520 and its design code shall be ASME Sec VIII. Request to confirm the same.	Noted and accepted
92	Technical volume II OF II	Technical Volume Clause No.8 d)	CO2 flooding system will consist of Min 2 nos. brand new CO2 cylinders of 45 Kg capacity each.	As per NFPA-12 standards, OEM recommends CO2 Flooding System of 22.5 kgs considering Bidder's Acoustic Enclosure volume. Detailed Calculation shall be submitted during DDE. Request to confirm the same.	Tender condition shall prevail.
93	Technical volume II OF II	Technical Volume Clause No.8 f)	One Blinking aviation lamp shall be provided at the top of compressor canopy suitable for hazardous area for fire indication	Hooter is provided in case of any GD-FD or ESD signal. As the height of the Package is less than 3 mtrs, we suggest to avoid Aviation Lamp. Request to confirm the same.	Tender condition shall prevail.
94	Technical volume II OF II	Technical Volume Clause No.8 i) Technical Volume Clause No.7.47 t)	Online weight measurement system for cylinders shall be provided along with CHS/ CHS (A) hanging weighing scale for each cylinder. Co2 system healthy indication with online weight loss indication on PLC.	Limit Switches are provided on individual CO2 Cylinder to ascertain if the CO2 Cylinder is healthy or not prior to starting of the Compressor. Also Pressure Switch is provided for the CO2 Flooding System. Bidder will provide mechanical weighing gauge to measure the weight of co2 cylinder and online arrangement to check the healthy status of co2 cylinder. When cylinder gets empty alarm will appear as "CO2 CYL. 1 EMPTY". And during the flooding of co2 "CO2 FLOODING" display caption will show in HMI. As such, no separate Online Weight Loss Indication device is required for CO2 System. Request to confirm the same.	Tender condition shall prevail.
95	Technical volume II OF II	Technical Volume Clause No.8 m)	Piping of CO2 flooding system shall be CS/ MS seamless high pressure pipe of Schedule 40 of ½ inch dia. Of appropriate length with a minimum safe distance of 4 Meter from CNG Compressor, the fittings like elbows, Tees, Union, sockets should be of same schedule and capacity for installation in a high pressure system as per NFPA-12.	Considering the velocity and Pressure of CO2 Gas, we propose 25-NB Such- 40 pipe which shall suit the application as per OEM design. Please note that we supplied all the packages to all the major CGD companies with 25- NB ERW pipe Such- 10 adequate for this application. Even the regular and approved CO2 Vendor are using 25NB Sch.40 pipe for this application. Request to Confirm the same.	Tender condition shall prevail.
96	Technical volume II OF II	Technical Volume Clause No.12.3)	Bidder shall conduct a field trial run of each compressor package for 72 hrs. (can be in multiple runs) at CNG Station as per QAP in which satisfactory operation of complete package together with all accessories/auxiliaries' controls shall be established for specified operating conditions without any major breakdown prior to the start of operation and maintenance period as defined in the contract	For Field trial run, Bidder suggests that 2 no's LCV to provided by Owner and will be decanted on continuous basis. Bidder complies for 72 hours for stable observation. Request to confirm the same	Requirements for field trial run shall be raised after site installation.



REPLY TO BIDDER'S PRE-BID QUERIES

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TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

Consultant: VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 27.06.2023

Date: 01.08.2023

Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
97	Technical volume II OF II	Technical Volume Clause No.12.3)	Compressor Package Performance test at sites shall be carried out as per ASME PTC9.	Please note that PTC9 is to establish rules for conducting tests of displacement compressors, vacuum pumps and blowers, however relevant standard shall be followed	To be reviewed during detailed engineering after submission of all documents, P&IDs, GADS, etc. after award. Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
98	Technical volume II OF II		VENDOR LIST FOR BOUGHT OUT ITEMS		
99	Technical volume II OF II	4	Ball Valves	Request to accept Hylok Make for Ball Valve . Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	
100	Technical volume II OF II	7	Fittings	Request to accept Hylok Make for fittings . Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	
101	Technical volume II OF II	8	SS valves (2/3 way)	Request to accept Hylok Make for SS valves (2/3 way). Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	
102	Technical volume II OF II	22	FLP Switch gear	Request to accept SAAI Electrica/PESO Approved make for FLP Switchgear. Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	
103	Technical volume II OF II	25	GD	Request to accept Ambtronics Make of Gas Detector having PESO Certification. Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMh CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

TENDER NO. IGL/ET2/CP/CC17561, Dated 20.06.2023

VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

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Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
104	Technical volume II OF II	22	Air exchanger GEI HamonInd Ltd/ GEA India / Patel Air temp / M/s Kirloskar Pneumatic Co. Ltd./CP	The mentioned approved makes are for designing and supply of Process Gas and Online Compressor Packages Gas Coolers as per API - 661 standards. However, Booster Compressor Packages are Hydraulically driven and are designed as per Manufacturer's Standard for the smooth and successful operation of the Package. As such, Designed & manufacturing of the Air Cooled Heat Exchangers is by OEM proprietary make. Hence we request you to Approve OEM proprietary as approved vendor. Bidder has supplied substantial packages with KAL Proprietary make to major CGD industries and also to IGL as per the Approved Makes (refer attached annexure I) and they are in continuous operation successfully running to the complete client satisfaction. Request to confirm the same.	
105	Technical volume II OF II	28	Suction And Discharge Filter	we supplied all the packages with Filters considering OEM Proprietary design for Maximum flow and Minimum Pressure Drop with long life more than one year, for the Filter Element. Also it is also complies with the Intensifier OEM suitability. Request to consider the same for easy availability of components and spares. Also, Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	Tender condition shall prevail.
106	Technical volume II OF II	37	ON OFF BALL/NEEDLE VALVE	Request to accept Hylok Make for ON OFF BALL/NEEDLE VALVE. Bidder has supplied substantial packages with similar make to major CGD industries and they are in continuous operation successfully running to the complete client satisfaction.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
107	Technical volume II OF II		LIST OF RECOMMENDED THIRD PARTY INSPECTION AGENCY (TPIA)	We suggest addition of GLIS (Gulf Lloyds Industrial Services (INDIA) Pvt. Ltd). as these third party agencies are currently doing good volume with CGD companies with HPCL, BPCL and IOCL Pipeline division. Request you to confirm the same.	Bidder shall follow TPIA list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items)
108	Technical volume II OF II	7.3	PLC CPU shall be Hot redundant (1 W+1S) with auto switch over without manual intervene. PLC shall be of modular in construction redundant power supply for CPU and HMI, for load, non-redundant I/Os, communication cards for connecting mass flow meter, communication card /port for future SCADA connectivity.	Redundancy of power supply in HMI and CPU and spare CPU (1Working + 1 Standby) Required. Client to confirm.	Tender condition shall prevail
109	Technical volume II OF II	8	Relief valves shall be provided at suction and discharge and each inter stages of compressor with setting as per cl.7.20.4 of API-618 with R.V. venting as per cl. 7.20.4 of API-618. All vents shall be connected to common relief valve header.	Relief valve is not required at suction as cascade pressure will not be as much high.	Noted and accepted.



REPLY TO BIDDER'S PRE-BID QUERIES

TENDER FOR PROCUREMENT OF 550 SCMH CNG BOOSTER COMPRESSOR PACKAGE FOR ALL IGL LOCATIONS & Gas

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VCS REFERENCE NO. VCS/C&P/17028/PC/BOOSTER COMPRESSOR/13

Owner: Indraprastha Gas Ltd.

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Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
110	Technical volume II OF II	9 (a)	Air compressor, drier and air receiver for instrument air, shall be kept off the package in safe area or owner's building.	Air compressor motor will be Non FLP as it will be mounted on safe area/client's building. Client to confirm.	Tender condition shall prevail
111	Technical volume II OF II	9 (a)	Air Compressor with discharge pressure of 7 kg/cm2 suitable for min 1.5 KW electric motor rating with dryer shall be supplied by the bidder.	We request client to permit use of ss304 tube for air compressor tubing due to low pressure.	Tender condition shall prevail
112	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Cables & wires	We request Client to approve Udey pyrocables & Avocab make flp cables as approved/supplied in other CGDs.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
113	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	FLP switch	We request Client to approve Keysons make flp cable glands as approved/supplied in other CGDs.	
114	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	FLP Motor	We request Client to approve Hindustan motors make FLP motors as approved/supplied in other CGDs.	
115	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Gas & Flame detector	We request Client to approve Ambetronics make GD & FD as approved/supplied in other CGDs.	
116	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Air compressor	We request Client to approve Real air compressor & Unique air compressor make air compressors as approved/supplied in other CGDs.	



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Sl. No.	Reference & Cl No.	Section Description	Subject Description	Bidder's Query/Clarification	IGL/VCS Reply
117	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Suction & Discharge Filters	We request Client to approve Delta make gas filters as approved/supplied in other CGDs.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
118	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Pressure & temp gauge	We request Client to approve Precision mass make TG & PG as approved/supplied in other CGDs.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
119	Technical volume II OF II	VENDOR LIST FOR BOUGHT OUT ITEMS	Heat Exchanger	We request Client to approve OEM/AIMEXL make Heat exchanger as approved/supplied in other CGDs.	Bidder shall follow recommended vendor list included in the tender, however project specific approvals may be given on submission of PTR during detailed engineering. (Refer to Note-1 of Vendor List for bought out items) Electrical components/instrument items shall be PESO approved.
120	Technical volume II OF II		Distance from Electrical items and instruments	<p>Please specify the following distances and clarify our scope with reference to cabling and tubing :</p> <p>1. Between Compressor package and air compressor/dryer required for actuation .</p> <p>2. Between Compressor package and CO 2 Flooding system.</p> <p>4. Between Compressor package and LCV Post.</p> <p>5. Compressor package and the electrical room distance</p> <p>6. Please confirm the loose supply for tubing outside the package and its distance.</p>	Length of the cable is already mentioned in MR cl. 4.0 , 1.1 (c) pg 7 of 259