

REPLY TO PRE-BID QUERIES

TENDER DOCUMENT FOR SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND COMPREHENSIVE MAINTENANCE OF 1200 SCMh GAS ENGINE DRIVEN CNG COMPRESSOR PACKAGES

TENDER NO: IGL/ET2/CP/CC18256

Sl. No.	Volume/ Clause No.	Section/ Page No.	Clause No.	Clause	Bidder's Query	IGL Reply																														
1	Commercial Volume I	7 of 113	2.1a & c	The Compressors are to be dispatched in lots as defined in clause no. 4.0 below.	We request purchaser to confirm the Lot size in numbers and how many packages will be required to supply in the first Lot.	Refer Corrigendum - I																														
2	Commercial Volume I	60 of 113	9.1	A. For Supply, installation & commissioning and Performance Acceptance Test: equivalent to 10% of respective Purchase Order value inclusive of all taxes, duties and charges towards supply, packing & forwarding, Transportation, Installation, Commissioning & PAT. B. For Comprehensive Maintenance Services: CPBG equivalent to 2.5% of annualized total Contract value for comprehensive maintenance (incl. of all taxes) initially and 7.5% of annualized individual release/purchase order value (inclusive of all taxes).	We draw reference from Office Memorandum dated 01.01.2024 issued by Ministry of Finance wherein the Performance Security in respect of procurement only of Goods/ Consultancy Services/ Non-Consultancy Services, has been reduced to an amount of three to five per cent (3-5%) of the value of the contract as specified in the bid documents. Copy attached for your reference. Purchaser also has accepted CPBG equivalent to 5% of award value on yearly basis towards Contract No : 7700003661 dated 14.09.2024. In view of above, it is requested to accept the CPBG to 5% to the purchase order as other all CGD companies are also following the same.	Tender Condition Prevails																														
3	Commercial Volume I	15 of 113	12	12.1 All bids must be accompanied by a bid security of amount Rs. 20,00,000/- (Rupees Twenty Lakh only). 12.2 Bid security/EMD against e-tender can be submitted either through online e-payment mode available on e-tender portal or in the form of Letter of Credit / Demand Draft / Banker's Cheque in favour of Indraprastha Gas Ltd, payable at Delhi or in the form of Bank Guarantee from any Nationalized/ Scheduled Indian Bank or by the branch of a reputable international bank located in India 12.3 Bid security/EMD can also be submitted through online transaction directly to IGL account as mentioned below. Bidders opting for this mode of EMD shall be required to upload the the bid liable for rejection. Account No. 200999031485 IFSC INDB0000005 MICR No. 110234002 Bank Name Indusind	We shall be submitting requisite EMD by way of Bank Guarantee. We request purchaser to confirm which bank details to consider while issuing Bank Guarantee in BG text at which SFMS IFIN 760 message to be sent by issuing bank, to establish the authenticity of given BG	For BG against EMD, Account details are as follows: Account No.: 200999031485 IFSC: INDB0000005 MICR No.: 110234002 Bank Name: Indusind Tender Condition Prevails																														
4	Commercial Volume I	60 of 113	9.5	While issuing Bank Guarantee issuing applicant must mention receiver's details as ICICI Bank IFSC- ICIC0000007, Branch CONNAUGHT PLACE, DELHI, in BG text at which SFMS IFIN 760 message to be sent by issuing bank, to establish the authenticity of given BG		For CPBG, IFSC: ICIC0000007 is to be considered. Tender Condition Prevails																														
5	Commercial Volume I	61 of 113	11.1	For Comprehensive maintenance services: To derive rate for sixth and subsequent years (6th to 10th year), 10% annual escalation on derived rate of 5th Year to be considered.	We understand that to derive rate for sixth and subsequent years (6th to 10th year), 10% annual escalation Year on Year basis on derived rate of 5th Year shall be considered. Please confirm.	Bidder understanding is correct																														
6	Technical Volume II	54 of 90	15	<table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Component</th> <th>% Mole</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Methane</td> <td>92.34</td> </tr> <tr> <td>2</td> <td>Ethane</td> <td>5.47</td> </tr> <tr> <td>3</td> <td>Propane</td> <td>0.32</td> </tr> <tr> <td>4</td> <td>Butane</td> <td>0.027</td> </tr> <tr> <td>5</td> <td>Pentane</td> <td>0.003</td> </tr> <tr> <td>6</td> <td>Nitrogen</td> <td>1.78</td> </tr> <tr> <td>7</td> <td>Carbon Dioxide</td> <td>0.00</td> </tr> <tr> <td>8</td> <td>Sulphur</td> <td>00</td> </tr> <tr> <td></td> <td>Total</td> <td>100</td> </tr> </tbody> </table>	Sr. No.	Component	% Mole	1	Methane	92.34	2	Ethane	5.47	3	Propane	0.32	4	Butane	0.027	5	Pentane	0.003	6	Nitrogen	1.78	7	Carbon Dioxide	0.00	8	Sulphur	00		Total	100	Under the given Gas composition, the cumulative of gas composition equals to 99.94%. Kindly provide the gas composition with cumulative of 100%	Refer Corrigendum - I
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7	Technical Volume II	13/90	1.6	<p>Acoustic enclosure for Compressor package. Each package shall be provided with two nos. IR Type L.E.L. gas detector and two nos. UV - IR flame detectors to cover the enclosure effectively.</p> <p>In case there is separate compartment for Gas engine and compressor, each compartment should have at least 2 nos. GD's and 2 nos. FD's i.e. total 4 nos. Gas Detector and 4 nos. Flame Detector for the package. Gas Detectors and Flame Detectors shall have indicators to see healthiness of the instruments.</p>	<p>We understand that PESO mandate towards double chamber safety design as well as the heat resistant shield to the gas engine are both currently in force and are to be complied with.</p> <p>Accordingly, the gas engine driven packages are to be supplied with both double chamber design with 04 sets of GD & FD as well as heat resistant shield to the engine.</p> <p>Please confirm if our understanding is correct</p>	<p>Bidder must comply to statutory requirements and standards as specified in Technical Volume - II.</p> <p>Tender Condition Prevails.</p>
8		8	4.2	<p>Supply Delivery Period: The material is to be delivered in lots as per IGL requirement. Each lot is to be delivered at IGL site/ stores within 16 weeks from the date of purchase order. Time period between subsequent lots shall be minimum 30 days.</p>	<p>The major suppliers viz. Gas Engine are delivering in 4 months time. This had led to longer lead times of such equipment. We request you to please revise the delivery schedule as per below 1) 1st Lot : within 24 weeks from the date of Delivery Order / Release Order 2) subsequent lots : within 20 weeks from the date of Delivery Order / Release Order. Or Provide us firm delivery schedule spread across the year from the date of FOA. Please note, 1st delivery should be 4 months from the date of FOA and PRS should not be applicable upto 5 months from the date of FOA.</p>	Tender Condition Prevails
9		62	13.1	<p>TERMS OF PAYMENTS : In case Installation, Testing & Commissioning and Performance Acceptance Test could not be executed within 120 days from the date of receipt of compressors at site/ store due to reasons attributable to Purchaser, the 10% payment shall be released.</p>	<p>The 10% payment shall be released against submission of BG of equivalent amount valid till the Guarantee / Warranty period.</p>	<p>The 10% payment shall be released without submission of BG.</p> <p>Tender Condition Prevails</p>
10		61	10.0	PRICE REDUCTION SCHEDULE	<p>We request you to modify the clause as "..... a sum @ ½ % (Half Per Cent) of the value of the work portion that is delayed per week for delay subject to maximum of 5% (Five Per Cent) of the value of the individual release order.</p>	Tender Condition Prevails
11		8	3.6	<p>For Comprehensive maintenance services: To derive rate for sixth and subsequent years (6th to 10th year), 10% annual escalation on derived rate of 5th Year to be considered.</p>	<p>"We would like to inform you that due to uncertainties of the wages, steel price etc we will not be able to predict exact variation. Also, we cannot load more than 15% due to higher cap in the maintenance. Hence, the rates from 6th to 10th year will be decided and mutually agreed before the closure of 5th year. Kindly confirm your acceptance."</p>	Tender Condition prevails
12		8	3.6	<p>For Operations: To derive rate for sixth and subsequent years (6th to 10th year), 10% annual escalation Year on Year basis on derived rate (excluding wage components, variation of which is payable on actual basis) of 5th Year shall be considered. It will be responsibility of bidder to ensure the payment of minimum wages of Centre/ state whichever is higher to workmen engaged for operations.</p>		
13				<p>GA wise location.</p>	<p>We intend to have site locations or GA wise locations in order to prepare for operation & maintenance charges .</p> <p>Also Specify wages to be considered for operation . state or central ?</p>	Tentative locations are mentioned in Material Requisition in Technical Volume (Volume II / II of Tender Documents). However, exact locations will be mapped in individual purchase orders.
14		13	1.60	<p>Separate flameproof junction boxes for different type of signals like analog, digital signals, alarm, shutdowns, and thermocouples, RTDs etc. for interfacing to FLP local panel. Same is not applicable for direct run cable up to PLC panel.</p>	<p>Please note that Local control panel (With PLC) is mounted on package itself hence junction boxes are not required. Instruments will be directly wired to Local control panel. This system is available in all our packages and accepted by all the CGD companies and 400+ CNG compressor are running successfully.</p>	Direct run cable upto PLC/ local panel, Junctions box is not required; rest tender condition prevail.
15		13	1.60	<p>Inlet twin suction gas filter / Duplex suction filter of filtration level upto 5 micron with oil drain valve, differential pressure gauge and temporary suction line strainer at the package inlet and at other stage (if required). A conical/ Y-type strainer for filtration level upto 5 micron shall be installed in the inlet pipe after the isolation valve by the contractor at the battery limit.</p>	<p>Please note that Duplex suction gas filter & basket strainer is provided and placed outside the compressor enclosure</p>	Noted

16		13	Clause no. 1.6	Separator/ Knockout drums/volume bottles with drains operated by solenoid valves, as required. Bypass valves for automatic drain system with manual drain shall be as per manufacturer's recommendation and proprietary design. All drain lines shall be provided with level operated / time based auto drain valves and NRVs. Test certificates for coalescent filters to be submitted.	The proposed CNG package has suction volume bottle at each stage and discharge volume bottle at final stage discharge only. The volume bottles at suction are connected to condensate drain system through auto-drain & Manual drain system. These volume bottles shall act as scrubbers/ condensate removal system. No separate KODs shall be supplied. Isolation valve is mounted in upstream of auto drain valve. This is our standard design offered in all our CNG packages. Please confirm your acceptance.	Noted
17		13	1.60	Block and bleed valves to be provided for Pressure gauges (including DPG) and pressure Transmitters.	Please note that As per our standard Manufacturer Practice we provide Needle valves for Pressure gauges and pressure Transmitters.	Noted. Rest tender condition prevails
18		17	Safety	Relief Valves shall be provided at suction and discharge and in between inter stages of compressor with setting as per cl. 11.18.5 of ISO 13631: 2009 with R.V. venting as per cl. 11.18.6 of ISO 13631: 2009. All vented lines to be connected to common relief valve header.	Please note that as per Manufacturer's standard practice, Relief valve will be provided on BDV and each stage discharge. Please confirm your acceptance.	Noted. Rest tender condition prevails
19		20	2.1.1	Bidder shall make his own provision for Instrument air with the flame proof electric motor driven air compressor, receiver and refrigerant type air dryer system	Please note, flameproof refrigerant type air dryer is not available. Only motor shall be flame proof. In case of requirement of flame proof air dryer, we can provide heatless type dryer.	The selected equipment must be suitable for operation in hazardous area and acceptable if meeting the tech spec requirement. Rest tender condition prevail.
20		20	2.1.2	The air compressor motor& air dryer shall be flameproof and will be kept in CNG area	Kindly confirm the same.	
21		24	4.8.2	Gas sections of coolers shall be designed as per API-11P requirements and shall be inspected by any approved 3rd party inspection agency.	As per manufacturer standard ,Gas sections of coolers shall not be U code stamping. Please confirm your acceptance.	Tender Condition prevails
22		24	4.8.2	Bidder shall submit cooler sizing calculation for review/ records.	Please Note The cooler sizing calculations cannot be submitted, being a proprietary design	Tender Condition prevails
23		24	4.8.2	Cooler design shall be on the basis of 20% excess capacity than required corresponding to suction pressure of 19 kg/cm2	We shall design the interstage and final stage discharge cooler for outlet temperature of 60degC. considering ambient temperature of 50degC. The cooler design shall be on the basis of 20% safety based on thermal duty at design suction pressure condition and the suitability of this area shall be checked for the most severe condition corresponding to suction pressure. This is our standard design practice and we follow this for all our CNG packages. Kindly confirm your acceptance.	Tender Condition prevails
24		26	4.9.6	One vent line from gas recovery vessel with double isolation valves shall be provided	Please note that we provide both automatic drain system & manual valve but for manual valve we provide single isolation valve instead of double isolation valve(ball valve type). Please confirm your acceptance	Tender Condition prevails
25		26	4.1	Pulsation, Vibration Control and Analog Study	Please note that Pulsation suppressor devices for CNG compressors are standardized in design. Order specific pulsation study is not carried out.	Tender Condition prevails
26		26	4.9.8	Oil recovery pot of suitable capacity shall be provided with double isolation manual valve and level gauge.	As per our standard design, We have provided single isolation valve at the drain line of oil recovery pot/vessel Please confirm your Acceptance	Tender Condition prevails
27		27	4.12.2	Bidders to provide ventilation / exhaust fans to vent out any entrapped gases in the enclosure before starting the main compressor. Necessary interlocking to be provided by the bidder for the same	Please note, as the cooler is of forced draft, the entrapped gases in the enclosure will be Vent out before starting the main compressor. Hence, ventilation fan is not envisaged.	Tender Condition prevails
28		27	4.12.3	Heat Exchanger / gas cooler fan shall have mechanical drive only and the same cannot be utilized as ventilation fan.	The enclosure shall have hinged doors instead of removable panels. Please confirm your acceptance.	Noted
29		28	4.12.6	The enclosures shall have doors for normal access and removable wall panels for ease of maintenance of all the components	Please note, as the cooler is of forced draft, the entrapped gases in the enclosure will be Vent out before starting the main compressor. Hence, ventilation fan is not envisaged.	Noted
30		28	4.12.8	All local pressure and temperature gauges shall have minimum dial size of 63 mm.	Please note that ,as per our standard, we have provided All local pressure and temperature gauges with 100 mm dial gauge size. This is our standard supply and accepted by all CGD companies and we have supplied 400+ packages.	Noted

31		36	7.3.4	Penalty for Non-Performance during Period of Operation & Maintenance	Please note In any case/ any situation, total penalty will be limited to 50% of monthly invoice value of concerned package including all penalty clauses i.e Clause 7.3.1 Penalty towards Excess Package Gas Loss , Clause 7.3.2 Penalty towards Excess Engine Fuel Consumption: , Clause 7.3.3 Penalty towards Package Efficiency Loss and Clause 7.3.4 Penalty for Non-Performance during Period of Operation & Maintenance Request you to include this clause to enable us to participate in the tender.	Tender Condition prevails
32		52 & 53	14.1/14.2/14.3	Net CV of gas considered in Kcal/Sm ³ : 8300 The guaranteed value of fuel consumption of gas engine in KG/HR shall be between 30 to 33 Kg/hr corresponding to flow of 1200 SCMh for the given gas.	We would like to bring into your notice that Fuel consumption range provided in the tender i.e. 30 to 33 kg/hr is less with the given calorific value of 8300 kcal/m ³ . During the tractable-IGL tender no:IGL/ET2/CP/EC16062 (tender document of the same attached for your reference. In the guaranteed parameter, below clause is mentioned " Fuel (Gas) consumption of package in Kg/ Hr at 35°C. Density of natural gas 0.775 Kg/SCM for production of 930Kg/hr, NCV of 11400Kcal/Kg (basis for loading and penalty). here, the Calorific value is 11400kcal/kg * 0.775 = 8835 kcal /m ³ , so the fuel consumption range is 30 to 33 kg/hr. In view above, please note, the calorific value is changed from 8835 kcal/m ³ to 8300 kcal/m ³ but the fuel consumption range remains same. Hence, we would like you to look into this and change the range from 33 kg/hr to 36 kg/hr for given calorific value of 8300 kcal/m ³ .	Refer Corrigendum - I for Gas composition & Calorific Value. Rest Tender condition prevails.
33	3.4, 3.5, 3.6 IFB - Vol I / 11. reasonability of rates			TYPE AND DURATION OF CONTRACT	The ten years O&M period shall be firm and awarded to bidder in totality. Alternatively, IGL can confirm firm O&M period for the first 5 years, and for 6th & 7th year we propose 15% escalation, and 20% escalation for 8th, 9th & 10th on YoY basis.	Tender Condition Prevails
34	3.3 IFB - Vol I / 11. reasonability of rates			TYPE AND DURATION OF CONTRACT / Notes to Material Requisition Vol II	For Comprehensive Annual Maintenance Contract (CAMC), fixed charges for 1st year to be considered within the range of 8% to 10% of unit Ex-works price including Installation, Commissioning & Field Performance Test and Transportation Charges. There shall be YOY escalation of 2% for the subsequent years. If bidder quotes lesser or higher price than the prescribed range of CAMC, than the bids will be liable to be rejected.	Tender Condition Prevails
35	2.2 IFB - Vol I / 14.2 SCC			OPERATION AND COMPREHENSIVE MAINTENANCE PORTION	The operation & comprehensive maintenance rates for that particular period (year) will be applicable in which the Compressor shall get commissioned.	Bidder understanding is correct. The rates shall be applicable as per clause no. 14.2 of SCC
36	4.0 IFB - VOL I			Delivery Schedule	Kindly specify per Lot qty's & modify delivery period of first Lot to atleast 20 weeks & subsequent lots to 18 weeks. As per tender, Motor's shall be IE-3 efficiency and delivery periods for these motors are high. Hence the request.	Tender Condition Prevails
37	VOL I GCC (13) / SCC (9)			CONTRACT-CUM-EQUIPMENT PERFORMANCE BANK GUARANTEE	BG should be considered separately for AMC and Equipment. For supply portion, the 10% basic value of PO CPBG shall be given per lot basis and not for the full contract. This is in view of the fact that all machines as per contract are not sometimes lifted by IGL and bidder ends up submitting a higher value BG. For CAMC, kindly consider 10% CPBG on per year basis as it is difficult to provide BG for period of 5 years.	Tender Condition Prevails
38	19 - GCC VOL I			Transportation	Equipment will be transported to destination as advised by Purchaser in the despatch clearance. Unloading at site shall be one time activity in scope of bidder either at site or stores. Transportation of equipment between sites or from stores to site and related loading & unloading is not included in scope of bidder. This will be additionally charged in case IGL wants to get the job done from bidder. Or else kindly give option for quoting RE-TRANSPORTATION rates in the SOR. Transit Insurance will be applicable & terminate once goods are unloaded at Site / Stores. No other insurance is applicable for the bidder like for storage of equipment at site / stores., theft, fire, damage etc. Ward & Watch, Storage of equipment at IGL site / stores is not part of scope of bidder. Bidder shall be relieved of the responsibility once equipment is unloaded at site / stores.	Tender Condition Prevails

39	20 - GCC / 14.1 SCC - VOL I			Guarantee / Warranty	If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time during twelve(12) months from the date of Commissioning of individual equipment or Eighteen (18) months from the date of Invoice of individual equipment, whichever period shall first expire, and the Supplier is notified thereof, Supplier shall, at his own expense and as promptly as possible, make such alterations, repairs and replacements as may be necessary to permit the materials to function in accordance with the specifications and to fulfil the foregoing guarantees. However, in no case, warranty of repaired/replaced part shall exceed 18 months from the date of commissioning of original equipment or 12 months from date of supply of individual equipment, whichever is earlier.	Tender Condition Prevails
40	26 GCC / 39 SCC			SUB CONTRACTING / SUB LETTING	We understand that subletting of contract to be allowed for existing contractor proposed by us or new contractor with request letter to Purchaser	Tender Condition Prevails
41	29 GCC / 10 SCC			<p>PRICE REDUCTION SCHEDULE (PRS)</p> <p>29.1 Time is the essence of the Contract. In case the Contractor fails to complete the Work within the Contractual Completion period, then, unless such failure is due to Force Majeure as defined herewith or due to Owner's defaults, the Contractor shall pay to the Owner, by way of compensation for delay and not as penalty, a sum @ ½% (half per cent) per complete week of delay of the value of the "supply portion for the quantity" that is delayed per complete week subject to maximum of 5% (Five Per Cent) of the total contract value.</p>	<p>PRICE REDUCTION SCHEDULE (PRS)</p> <p>29.1 Time is the essence of the Contract. In case the Contractor fails to complete the Work within the Contractual Completion period, then, unless such failure is due to Force Majeure as defined herewith or due to Owner's defaults, the Contractor shall pay to the Owner, by way of compensation for delay and not as penalty, a sum @ ½% (half per cent) per complete week of delay of the value of the "supply portion for the quantity" that is delayed per complete week subject to maximum of 5% (Five Per Cent) of the BALANCE UNDELIVERED PORTION value only. PRS shall be applicable per LOT order.</p>	Please refer clause 10.2 of Special Conditions of Contract
42	33.0 GCC Vol I			TERMINATION FOR OWNER'S CONVENIENCE	Owner/Purchaser shall take complete deliveries as per PO.	Tender Condition Prevails
43	34.0 GCC / 42 SCC Vol I			Force Majeure	Bidder shall not be liable for any loss due to natural calamity for the equipment once delivered and/or kept in IGL stores/site under circumstances of equipment still not Installed, erected or commissioned.	Tender Condition Prevails

44	60 GCC - VOL I / 29, 33 SCC		Insurance & Storage of material	<p>Bidder shall be liable for only transit insurance restricted and limited only for the on road inland transit period and same shall expire once material is unloaded at site / stores. Any sort of Insurance apart from transit insurance shall not be in the scope of the bidder. Transit Insurance will be applicable & terminate once goods are unloaded at SGL Site / Stores. No other insurance is applicable for the bidder like for storage of equipment at site / stores., theft, fire, damage etc. Ward & Watch, Storage of equipment at site / stores is not part of scope of bidder. Bidder shall be relieved of the responsibility once equipment is unloaded at site / stores. Equipment will be transported to destination as advised by Purchaser in the despatch clearance.</p> <p>Unloading at site shall be one time activity in scope of bidder either at site or stores. Transportation of equipment between sites or from stores to site and related loading & unloading is not included in scope of bidder. This will be additionally charged in case Purchaser wants to get the job done from bidder. Or else kindly give option for quoting RE-TRANSPORTATION rates in the SOR. Transit Insurance will be applicable & terminate once goods are unloaded at Site / Stores. No other insurance is applicable for the bidder like for storage of equipment at site / stores., theft, fire, damage etc. Ward & Watch, Storage of equipment at site / stores is not part of scope of bidder. Bidder shall be relieved of the responsibility once equipment is unloaded at site / stores.</p>	Tender Condition Prevails
45	VOL I SCC - 3		Inspection & Tests	Kindly approve Gulf Lloyds Industrial Services (INDIA) PVT. LTD. third party inspection agency. They are approved by PNGRB.	Bidder may carry out inspection by any PNGRB approved TPIA
46	13 SCC / VOL I		<p>Through direct payment within 45 days from date of receipt of invoice. Payment towards supply, transportation, loading & unloading of Compressor Units at IGL site/store at NCT of Delhi & NCR Region, Installation, commissioning with commissioning spares & Field performance shall be made in following order:</p> <p>i. 90% (Ninety Percent) Payment against above descriptions shall be released on receipt of Compressor Units at IGL store/ site against submission of dispatch documents, LR / GR, manufacturer's certificates, invoice, packing list, insurance policy, guarantee/warranty certificate, inspection release note, dispatch clearance and material receipt certificate issued by Owner.</p> <p>ii. 10% (Ten Percent) Payment against above descriptions shall be released after successful completion of installation, Testing, Commissioning and Performance acceptance Test of each Compressor Unit package at the site and Acceptance thereof by the Owner.</p> <p>iii. In case Installation, Testing & Commissioning and Performance Acceptance Test could not be executed within 120 days from the date of receipt of Compressor Unit package at site/ store due to reasons attributable to Purchaser, the above 10% (Ten Percent) payment shall be released.</p>	<p>Request to modify payment terms as under -</p> <p>14.1 Payment towards Supply (Compressor Package)</p> <p>Through direct payment within 30 days from date of receipt of invoice.</p> <p>i) 90% (Ninety Percent) Payment shall be released against receipt of materials at site on submission of dispatch documents, manufacturer's certificates, invoice, packing list, insurance policy, guarantee/warranty certificate, inspection release note, Goods Receipt Voucher (GRV) & dispatch clearance issued by the Owner.</p> <p>ii) 10% (Ten Percent) Payment shall be released within 60 days under either of following conditions pending on behalf of purchaser :</p> <p>(A) Successful completion of installation, Testing, OR,</p> <p>(B) Commissioning of each compressor package at the site, OR,</p> <p>(C) Successful Performance acceptance Test at site pending from purchasers side and acceptance by owner for each compressors,OR,</p> <p>(D) Package lying idle at site / stores</p>	Tender Condition Prevails
47	11 SCC VOL I / Notes to MR Vol II		REASONABILITY OF RATES / Material Requisition	Kindly consider the firm CAMC for 5 years only for contract. For 6th & 7th year we propose 15% escalation, and 20% escalation for 8th, 9th & 10th on YoY basis.	Tender Condition Prevails
48	11 SCC VOL I / Notes to MR Vol II		REASONABILITY OF RATES / Material Requisition	<p>Kindly consider the FIRM Operation for 5 years only for contract. For 6th & 7th year we propose 15% escalation, and 20% escalation for 8th, 9th & 10th on YoY basis.</p> <p>We recommend that a minimum caping should be maintained by IGL for the minimum wages as above proposal. As per revisions in minimum wages, additional rates should be revised periodically.</p>	Tender Condition Prevails

49	19 SCC Vol I			STATUTORY APPROVALS	Bidder shall be liable for their equipment PESO documentation only. All other statutory approvals shall be in scope of Owner/Purchaser.	Tender Condition Prevails
50	7.3.1 VOL II			PENALTY TOWARDS EXCESS GAS CONSUMPTION	The value of ' G ' shall be combination of below conditions :: (1) The value of ' G ' for vent loss shall be taken from the vent mass flowmeter. As per compressor design logic venting is only possible through rod packing seals and our block being of pressurized crankcase design, there is no vent loss during compression. Hence vent mass flow meter is not applicable for us but same shall be applicable for bidder's offering block with non-pressurized crankcase. (2) The value of ' G ' for leakage :: The individual mass flowmeter comes with batch accuracy of +/-0.5% . Hence instrument accuracy as indicated by OEM i.e +/- 0.5% per mass flowmeter to be considered.	Tender Condition Prevails
51	7.3.2 VOL II			PENALTY TOWARDS EXCESS POWER CONSUMPTION	Machine is subjected to intermittent start / stops based on the load & power consumption at station. The gas density varies throughout the month and instrument batch accuracy as indicated by MFM - OEM i.e +/-0.5% per mass flowmeter to be considered. Hence establishing the variations in power consumption figures than the quoted consumptions need consistency of above three factors. Accordingly, we suggest on monthly basis bidders should demonstrate the actual fuel figures during operation & same should be compared with quoted figure to impose penalty.	Tender Condition Prevails
52	7.3.3 VOL II			PENALTY FOR PACKAGE EFFICIENCY LOSS	For penalty towards package efficiency loss, only the operational load hours of the m/c to be considered for calculating capacity. Formula for e.g., Total hours - Unloading hours = Loaded hours. OR Maximum efficiency of the package to be considered as 98% due to frequent start stop of the m/c which is a common feature at CNG stations occurring due to load conditions. None of the Compressors are designed to start / stop immediately on load condition for safe operation. Also during unloading conditions, compressors cannot deliver capacity. Hence, maximum efficiency of the package to be considered as 98%. The suction pressure at Compressor package inlet PT shall be considered for calculating flow, power & efficiency.	Tender Condition Prevails
53	7.3.4 (a) VOL II			Penalty for Non-Performance during period of Operation & Maintenance. 9.7.3.2 Details of Penalty for non-performance of equipment (a) On normal day & in case of breakdown (i.e. the day other than the schedule maintenance day):	Maximum penalty of 50% will be acceptable & applicable only on maintenance charges including breakdown beyond 15 days, Efficiency, Package fuel consumption & gas loss if any. IGL shall release operation charges without any deduction.	Tender Condition Prevails
54	7.3.4 (b) VOL II			(b) On Schedule Maintenance day (i.e. excluding periodic major overhaul of compressor/motor):	Maximum penalty of 50% will be acceptable & applicable only on maintenance charges including breakdown beyond 15 days, Efficiency, Package fuel consumption & gas loss if any. IGL shall release operation charges without any deduction.	Tender Condition Prevails
55	10 VOL II			FIELD TRIAL RUN (Commissioning and Commercial Operation)	Kindly accept field trial run for only Four (4) hours cumulative basis.	Noted

56	13.0 - VOL II		<p>OPERATION & MAINTENANCE SERVICES</p> <p>The date of successful performance test (PT) at site (which shall be conducted within 90 days from the date of successful commissioning of the machine) will be considered as date of start of the annual maintenance contract. However, bidder shall be paid only 50% of O&M charge for operation and maintenance of the compressor from the date of commercial operation upto the date of performance test as part payment against O&M till the capacity and other guaranteed parameters of the package is established through PT. The balance 50% of O&M charge (from the date of commercial operation upto the date of PG test) shall be released to the bidder subsequent to successful PT (ie, after establishing all the guaranteed parameters as per tender) In case the PT is not successful, the balance 50% shall be forfeited in addition to provision of cl. 7.3-A of this Section. The bidder must follow the 'OPERATION & MAINTENANCE REQUIREMENT' as stated below but not limited to and ensure to provide trouble free services to the satisfaction of the owner</p>	Request site acceptance test (PT) to be conducted immediately after commissioning of equipment is completed. In case PAT is delayed due to reasons attributable to IGL, then post commissioning the CAMC charges shall be paid 100% to the bidder.	Tender Condition Prevails
57	4.1.5 Vol II		Note that the pressures given on the data sheet are at the compressor package battery limits, bidder shall consider all pressure losses at suction, interstage and discharge at the specified capacity (with no -vetolerance) for compressor and indicate the same on the data sheets.	We shall consider 16 Kg/cm2G pressure at compressor suction flange for compressor sizing.	Tender Condition Prevails
58	Pg. 65 Commercial		23.2 Operation & Comprehensive Maintenance Period Bidder shall provide Operation & Comprehensive Maintenance during warranty period. Warranty period shall be as defined in tender document. However, maximum duration of contract for operation & comprehensive maintenance shall be limited to 18 months from the date of receipt of last Compressor of each lot at IGL store / site	Warranty Period will be applicable 12 month from date of operation and 18 month of LR copy, whichever earlier	Tender Condition Prevails
59	Pg. 65 Commercial		Old spares removed during any type of maintenance activity will be submitted to IGL by vendor. However, vendor will have to take care for disposal of consumables like waste oil, O Rings, Gaskets, Grease, Waste cloth etc. Waste oil collection and disposal in safe manner shall be done by the vendor only.	Since this is CAMC contract hence all the consumable and spare parts belong to CP only.	Tender Condition Prevails
60	Technical Vol II Page 7		7.1 Bidder shall guarantee 600 SCMh capacity of compressor with given gas composition, at suction pressure of 16 kg/cm2(g) and at suction temperature of 300 C, discharge pressure of 250 kg/cm2(g) with no negative tolerance for errors in instruments and measurements	we under stand here suction temperature in 30 °C instead of 300 °C. , please clarify	Bidders Understanding is Correct
61	Technical Vol II Page 7		Since the compressor suction pressure varies from 14 kg/cm 2 g to 19 kg/cm 2 g at present, the compressor shall be suitable to deliver flow corresponding to 14 and 19 kg/cm2 (g) at present.	Compressor will deliver the suitable flow at 14 to 19 kg.cm2, but operation penalties should be consider only as per GP sheet, if machine is not running on guranted parameter due to site issue then penalties should not be applicable	Tender Condition Prevails
62	Technical Vol II Page 32		A. Package Gas Loss: The bidder shall design the compressor package so that no venting and leakage of gas takes place. Bidder shall indicate actual vent & leakage losses through the compressor package. If package loss is quoted more than 1% of suction capacity gas consumption than bid shall be rejected. This quoted figure will be used for evaluation and total quoted price for all compressors towards supply, special tools and tackles, transportation,	Instrument error/instrument accuracy shall be consider as per OEM recomandation for gas loss penalty	Tender Condition Prevails
63	Technical Vol II Page 33		7.3.1 Penalty towards Excess Package Gas Loss: During the O&M period, cost towards excess gas loss beyond the quoted figure shall be deducted from O&M bills. Following calculations shall be used for deduction towards excess gas loss: $E = 1.2 \times [(G - (O * D)) * H]$	Instrument error/instrument accuracy shall be consider as per OEM recomandation for gas loss calculation	Tender Condition Prevails

64	Technical Vol II Page 33		7.3.2 Penalty towards Excess Energy Consumption: During the O&M period, cost towards excess energy consumption beyond quoted figure shall be deducted from O&M bills. Following calculations shall be used for deduction towards excess energy consumption. $F = 1.2 \times [(G-Q) \times H]$	Minimum 4 hrs compressor continues running required to calculate the energy consumption, if sufficient load not available at site than penalties of excess energy consumption will not be applicable	Tender Condition Prevails
65	Technical Vol II Page 33		7.3.3 Penalty towards Package Efficiency Loss Rs. 5/ Kg will be recovered for delivering each kg lesser than the rated capacity & following calculations shall be used: $F = 5 \times \{(600 \times H \times RD \times AD) - M\}$	Minimum 4 hrs compressor continues running required to calculate the Package Efficiency, if sufficient load not available at site than penalties against Package Efficiency will not be applicable or considering the machine switching (Auto stop and start) penalties shall be applicable on or below 96% efficiency	Tender Condition Prevails
66	Technical Vol II Page 33		For GAs Muzaffarnagar, Rewari, Kaithal and Karnal penalty over breakdown upto 6hrs shall be considered nil. For GAs Ajmer, Rajsamand, Pali, Kanpur, Banda and Chitrakoot or in any other future coming remote GAs in IGL's periphery penalty over breakdown upto 8 hrs shall be considered nil. However, rest slabs for penalty shall be same as considered for Delhi, Gautam Budh Nagar, Ghaziabad and Gurugram GA. b. On schedule maintenance day (excluding periodic major overhaul of compressor/ motor): i. If the equipment is down for beyond the time indicated for the agreed schedule maintenance, the party would be penalized as per follows (for NCT of Delhi, Gautam Budh Nagar, Ghaziabad, Hapur & Gurugram): <input type="checkbox"/> Upto 4 hours: Nil <input type="checkbox"/> 4 hours to 12 hours: Rs. 10,000/- per instance <input type="checkbox"/> 12 hours to 24 hours: Rs. 15,000/- per instance <input type="checkbox"/> More than 24 to 72 hours: Rs. 25,000/- per instance ii. In addition to above, if case there is a continuous breakdown beyond 72 hours up to 15 days of a calendar month, 50% of monthly maintenance charges excluding operational part will be deducted. iii. In case there is a continuous breakdown beyond 30 days of a calendar month, Entire Monthly Maintenance and operation charges shall be deducted	on point iii, Operation charges shall be payable to site engaged team (operation)	Tender Condition Prevails
67	4.8.2		Inter / After Gas Coolers Air-cooled inter-stage and final stage discharge coolers shall be provided which shall limit the gas temperature after the after cooler to 52°C. For calculating the surface area of the air cooler the ambient air temperature of 47°C and 90% RH shall be considered. Cooler design shall be on the basis of 20% excess capacity than required corresponding to suction pressure of 19 kg/cm ² . Gas sections of coolers shall be designed as per API-11P requirements and shall be inspected by any approved 3rd party inspection agency. The Gas and water sections shall not be "U" code stamped but TPI inspected. For cooling of the Heat Exchangers a cooling fans to be provided inside the enclosure(s). Cooling system shall be preferably installed on the same skid as the compressor due to space constraints. Bidder shall submit	The approach would be above ambient temperature 10°C. (max. ambient temp. 42°C + 10°C = 52°C). The Gas cooler design shall be such that suitable to the application as per manufacturers design. Gas coolers of the design shall be designed as per ASME-SEC-VIII, as per manufactures standard design approach same is proven for earlier supplied packages. - Cooler sizing calculation is proprietary, so not feasible to submit..	Please refer the clause 4.8.2, Technical Volume - II of subject tender.

68	6.2		<p>Mechanical running test (MRT) The MRT for the each compressors shall be carried out in presence of PURCHASER/CONSULTANT with job or shop driver including complete job driving system i.e., job driven V-belt, job pulleys etc., for 4 hours continuously at shop of compressor manufacturer. The compressor need not be pressure loaded for MRT test. During this test following shall be recorded at agreed intervals.</p> <ul style="list-style-type: none"> - Vibration levels measured on cylinders and frame - Bearing temperature - Oil cooler inlet and outlet temp - Sound level <p>Subsequent to satisfactory run the compressor shall be examined as per standard procedure & following shall be examined as minimum: Internal Inspection certificate for strip test after no-load run of compressor is to be submitted for review of client /consultant.</p> <p>Strip test is limited to open Crank Case cover, X-Hd guide &Dist.pc. Cover and opening of bore & other parts, piston, one valve per cylinder. Visual examination of position rod</p> <p>If any of part found damaged, all similar components shall be stripped for inspection. The MRT test shall be repeated after replacement of such parts.</p> <p>All the interlocking and performance of the instrumentation system will be</p>	MRT will be carried out as per manufacturer's standard procedures. Reports shall be presented for review to Purchaser / Consultant / TPIA during final String Test of the Complete Package.	Tender Condition Prevails
69	1.6		<p>Gas meter (3 nos.): Mass flow meter (with integral local display to measure gas flow at package inlet , fuel consumption at gas engine inlet& package discharge) based on Coriolis principle and as per AGA-11. While installing special care shall be taken to isolate the mass flow meter from piping vibration.</p> <p>Additionally, Thermal type mass flow meter to be provided to measure package gas loss/vent.</p>	Compressor design being a pressurized crankcase, there will be no gas loss through vent, considering the same Vent Mass flow meter not considered, kindly accept.	Tender Condition Prevails
70	1.6		Common structural steel skid for the compressor- gas engine and for all auxiliary systems	All auxiliaries like CO2, Air compressor, etc will be supplied loose & to mounted apart from package.	Tender Condition Prevails
71	1.6		Override facility in LCP or in HMI to fill LCV in priority panel of compressors shall be provided.	This can be provided at programme logic with password protection instead of manual switch. Provision of manual switch for priority panel can lead to hazard in case on unauthorized person operation at site.	Tender condition prevails; however regarding provision through programming in PLC also to be enabled as per requirement.
72	1.6		Piping from air compressor and CO2 cylinders up to enclosures at a max distance of 50 m each is in the scope of bidder and shall be treated as part of supply & erection.	All field piping is not considered in bidder scope, kindly accept.	Tender Condition Prevails
73	1.6		Each stage outlet temperature before cooler & after cooler to be displayed on PLC.	Each stage outlet temperature before cooler and for after cooler temperature before and after will be displayed on PLC.	Noted
74	1.6		Supply, Laying and Termination of following cables including all erection accessories like Lugs, Glands etc is included in the scope of bidder:	All field cables will be in the scope of IGL. Request to kindly exclude supply of cables from scope of bidder.	Tender Condition Prevails
75	1.6		Following documents shall be submitted by the successful bidder Pressure vessel thickness calculations to be submitted.	Will be as per Manufacturer's Proprietary Design Standards and limited to as per industry norms. Design calculations are not feasible to be provided.	Tender Condition Prevails
76	2.1.2		Air compressor of capacity approx 7.5 kW preferably of IR/KPCL/Elgi/CP make of approx 16 kg/cm2(g) discharge pressure with PRV, and 1000 water litre capacity air receiver shall be supplied for each CNG compressor package for gas engine starting purpose. Air dryer suitable for automatic operation shall also be supplied along with all accessories. The air compressor motor& air dryer shall be flameproof and will be kept in CNG area. Piping, electrical and instrumentation cabling shall be in bidder's scope. Tapping in the 1000WL air receiver vessel shall be provided with NRV, PRV (If required) and isolation valve for CNG dispenser instrumentation line. Air receiver shall be provided with SRV (safety relief valve), pressure gauge and drains. Manual drains and automatic moisture traps/moisture separator cum regulator shall be provided in the system.	Suitable air compressor with discharge pressure 10 barg shall be provided along with all required accessories. Instrument & starting air provision as per OEM standard, desired pressure will set at receiver. For clarification purposes, we'd like to inform that Since moisture is completely removed by the dryer, the dry air is stored in the Receiver which do not require auto drain arrangement as its already provided in dryer for draining the moisture. We do not recommended bypassing of the dryer which will lead to consequential failure of air starter.	Tender Condition Prevails

77	2.2.5			All drains from different process equipment, distance piece and packing shall be manifolded and terminated at single point for customer interface duly flanged with isolation valve	We shall provide oil recovery vessel (oil drain pot) of 20 liters to ensure uninterrupted operation of machine. ORV shall be mounted inside the package. All drains terminated at single point for customer interface duly tapped with isolation valve	Noted
78	2.2.7 2.2.8			The Bidder work shall commence from Outgoing terminals of PDB/ACDB/LDB (PDB/ACDB/LDB is in the scope of Owner).Downstream distribution arrangement from the PDB to the Compressor is in the scope of Bidder.	All field cables will be excluded from scope of bidder. Kindly accept.	Tender Condition Prevails
79	4.9.1			Carbon Steel separators / KOD volume bottles with auto and manual drain system shall be provided for the capacity as required.	All the separators are with auto drain system rather than manual drain system specially considered for safety reasons. Only ORV with manual drain is considered. Drain system will be timer based as per Manufacture's Proprietary Design Standards offering. Automatic drain valves are provided in each stages, however providing Manual drain valve in pressurized gas system is safety hazard & can cause operational issues. Manual drain valve will only be provided for draining oil in depressurized circuit for draining oil when compressor is in stop condition. We have supplied compressor packages to various CGD companies Gail India, Gail Gas, Green Gas, CUGL, MNGL, IGL etc. considering safety reasons with similar arrangements and have been successfully running without any O&M issues.	In case of proprietary design of the offered compressor, the same can be accepted subject to submission of PTR of the offered compressor
80	4.11			Gas Engine	We shall considered Cummins India make gas engine	Noted
81	4.13			Piping	Gas piping/ tubing at 3rd stage discharge will only be in SS-316, with SS fittings, Rest all piping /tubing will be Combination of Flanged & screwed connections with CS material (pipes, Fittings & Flanges) as per application requirement & standard design. This is as per manufacturing standard design.	Noted & will be reviewed during detailed engg. & may be accepted if found technically suitable.
82	4.13			Piping	Piping between PRS Skid to Inlet of Compressor Package, air compressor & CO2 piping upto enclosure will be in IGL scope, as site to site location is not fixed, hence request to considered same.	Tender Condition Prevails
83	4.13.5			The instrument air tubing material shall be SS316 as per ASTM A269.	Instrument air tubing shall be SS304.	Noted
84	4.13.10			External drain & vent piping shall be Carbon Steel and not less than 1" nominal size. However, all the internal drains shall be SS 316 tube as per ASTM A269. However all the internal drains shall be SS 300 series material.	Package oil drain will be of 1/2" as per manufacturer standard	In case of manufacturer's standard for piping size of package oil drain, the same can be accepted subject to submission of PTR of the offered compressor. Rest Tender Condition Prevails.
85	5.9.4 5.9.17			Electrical instrumentation shall be certified by a recognized authority such as BASEEFA, PTB, LCIE, CESI, INIEX, CSIR ,CEA or any agency approved by Indian Government.	CCOE or its equivalent certificate (FM, CSA , ATEX, UL, CMRI) whichever applicable & available will be provided. All Test certificates will be as per QAP submitted with Technical offer.	All electrically operated Instruments shall have mandatorily PESO certification; rest tender Condition Prevails
86	5.9.15			The package shall be supplied with 4 nos. mass flow meter, one each for compressor suction, discharge, engine fuel consumption and for measuring vent loss. While the suction, discharge and fuel consumption meters shall be Coriolis principle based, as per AGA-11 standard, approved for custody transfer application. The mass flow meter for measuring vent loss shall be thermal type. Flowmeter shall have isolation valve before and after for checking and zero calibration.	Compressor design being of pressurized crankcase, there will be no gas loss through vent. Considering the same, Vent Mass flow meter is not considered. As per standard design we shall not consider the online test arrangement provisions of offered mass flow meters. Provision of isolation valve for the mass flowmeters is not feasible as per Manufacture's Proprietary Design Standards for the piping layout.	Tender Condition Prevails
87	8.2			PAINTING AND PROTECTION	Painting shall be as per manufacturer's standard procedures. Package enclosure shall be Powder Coated ensuring longer durability in all weather out door installation conditions.	Tender Condition Prevails

88	5.9.18		Compressor package shall be provided with the following indicators: i. Pressure indicator each stage suction and discharge. ii. Temperature indicator each stage suction and discharge iii. Oil pressure indicator on each pressure lubrication system iv. Oil levels indicator, field mounted v. Air pressure low indicator vi. Hour meter vii. Non- resettable electromechanical hour meter on local control panel. viii. Hydraulic oil cooler inlet & outlet temperature on local gauge panel (if required) ix.Low oil level protection devices	We shall provide following Indicators on compressor package: i. Pressure indication at each stage suction. ii. Temperature indication at each stage discharge. iii. Oil switch and no flow switch on lubrication system. iv. Oil level gauge on oil tank. vi. Hour meter shall be available at HMI. Separate hardware not considered ix. Crankcase oil temperature indication. ix. Low oil pressure protection is provided. Level indicator provided	Tender Condition Prevails
89	5.9.18		The compressor package shall be furnished with the following trip logic (but not limited to) that shall stop the compressor and suction of compressor shall be isolated: xiii. Flow through the vent line	xiii. Flow through the vent line trip logic not considered.	Tender Condition Prevails
90	5.9.18		First port shall be for remote monitoring of the parameters. Besides PLC display, all the parameters which are measured should be monitored on a HMI/ MMI for remote monitoring as well as of remote operation with RTU/ SCADA communication over TCP/IP Modbus protocol. Vendor shall provide protocol details to OWNER and also provide necessary support for third party interface for remote data connectivity.	SCADA port is provided. SCADA is not considered in bidder's scope. Ethernet port is provided for customer SCADA communication. SCADA compatibility is provided for remote monitoring. We shall supply one additional TAsm2m - Gateway for GPRS/SCADA connectivity. Sim card required for activation & monthly SIM charges shall be arranged by IGL. One port is provided for remote monitoring and providing ethernet port for laptop access.	Necessary suitable ports as per tech spec shall be provided. The SCADA communication will be over TCP/IP Modbus protocol. The offered equipment must be suitable for tender requirement. Tender Condition Prevails
91	5.9.18		Redundancy in PLC is required. PLC shall incorporate all process parameters (specified elsewhere) and status of compressor, engine & priority panels and shall be modular in construction with 100% redundancy with respect to CPU, Power supply, Interface.	100% redundancy shall be provided only for CPU. Kindly accept	Tender Condition Prevails
92	5.13.1		Compressor Instrumentation	We shall provide instruments as per P&ID submitted and Instrument schedule for approval. Following not considered : 1. Frame Oil Sump/Reservoir Level : Switch not considered. 23. Coolant main pump disch. Pr.-NA as compressor is air cooled. 28. Coolant cooler Outlet Temp.-NA as compressor is air cooled. 29. Coolant reservoir Level-NA as compressor is air cooled. 40.Ist stage dish pressure low / high-Low alarm and trip not considered. 42. Final Disch Pressure after coalescent filter *- Low alarm and trip not considered. 43. Blow Down vessel level-Not considered. Time based oil drain is provided.	Tender Condition Prevails

93	5.13.2		Engine Instrumentation	<p>We shall provide instruments as per P&ID submitted and Instrument schedule for approval.</p> <p>Following not considered :</p> <p>6. OIL COOLER OIL OUTLET TEMP.-Transmitter and gauge not considered.</p> <p>8. Differential pressure gauge for fuel and air mixture- Engine suction gas pressure gauge and transmitter only shall be provided.</p> <p>14. ENGINE JACKET C.W SUPPLY TEMP.- ENGINE JACKET C.W OUTLET temperature gauge and transmitter shall be provided</p> <p>16. COOLANT MAIN PUMP DISCH. PR. - Not applicable.</p> <p>17. COOLANT SUPPLY HEADER PR.- Not applicable.</p> <p>19. COOLANT COOLER OUTLET TEMP - Not applicable.</p> <p>20. COOLANT RESERVOIR LEVEL.- Not applicable.</p> <p>22. AIR RECIEVER PRESSURE- Engine air starting pressure gauge and tranmitter shall be considered.</p> <p>24. INLET AIR FILTER DIFFERENTIAL PRESSURE- Shall be same as engine air starting</p>	Tender Condition Prevails
94	21.0		QUALITY ASSURANCE PLAN	<p>Inspection & Testing will be as per Approved QAP.</p> <p>Following points are not applicalbe for engine, we shall consider below points for pressure vessels used in compressor package as per past tender. Please approve.</p> <p>2. Dimension and Visual Inspection Report as per drawing-Not considered for engine, shall be provided for vessels used in compressor package</p> <p>3. Material test certificates for RAW Material (Pressure Parts)-Not considered for engine, shall be provided for vessels used in compressor package</p> <p>4. Radiography of pressure vessels at applicable-Not considered for engine, shall be provided for vessels used in compressor package</p> <p>5. Hydro test of pressure vessels-Not considered for engine, shall be provided for vessels used in compressor package</p> <p>6. Final painting and cleaning-Not considered for engine, shall be provided for vessels used in compressor package</p>	Noted
			QAP: Engine		Noted. QAP will be approved at the time of detailed engineering & Bidder to carry inspection and all tests accordingly.
			Control Panel and Soft Starter Functional test	Functional test during FAT.	Noted. QAP will be approved at the time of detailed engineering & Bidder to carry inspection and all tests accordingly.
			Heat Exchangers (at sub-vendor works) WPS / PQR – Welder Qualification	Welding is not applicable.	Noted. QAP will be approved at the time of detailed engineering & Bidder to carry inspection and all tests accordingly.
95	-		<p>SPECIFICATION OF GAS DETECTOR Infrared Sensor with Transmitter, with Local Display and Indicator</p>	<p>Gas detector with Local Display and Indicator not considered, For safety reasons, GD readings are purposefully shown only on HMI screen, since in event of gas leakage, it is not recommended for any operator to enter the area where leaked gas is already present. Further, visual indication on HMI, alarm & trip are also provided to take necessary actions without exposing person to hazard.</p>	Tender Condition Prevails
96	22		Preferred makes	Shall be as per final approved vendor list. Kindly approve below makes :	Kindly refer Note 1 & Note 2 of Preferred makes (Clause No. 22 of Technical volume of Tender).
			GD & FD	PPS (pollution protection systems)	
			Ball Valve	PHBB	
			Check Valves	Parker	
			Instrument SS fittings/valves	Baumer	
			Discharge Filter	OEM Approved	
			SUCTION FILTER	R S Instrumentation, J G Acero Industries pvt	
			Air Line PRV	AIRA EURO AUTOMATION PVT. LTD	
			Engine	Cummins, Ashok Leyland	