

**REPLY TO PRE-BID QUERIES**

**SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND COMPREHENSIVE MAINTENANCE OF 1200 SCMH ELECTRIC MOTOR DRIVEN CNG COMPRESSOR PACKAGES**

**TENDER NO: IGL/ET2/CP/CC17823**

Sl. No.	Volume/ Section/ Clause No.	Page No.	Clause No.	Clause	Bidder's Query	IGL Reply
<b>Bidder Name: TULIP COMPRESSION</b>						
1	Commercial Volume - SCC	60 of 104	16.0	<p><b>Supply portion:</b> @ ½ % (Half Per Cent) per week of delay or part thereof of the value of item being supplied of which default in delivery has taken place.</p> <p>Installation, Testing and Commissioning and Performance Acceptance Test: @½ % (Half Per Cent) per week of delay or part there of the value of work that has been delayed.</p> <p>Maximum PRS will be 5% of value of each Purchase Order of Supply, Installation, Testing and Commissioning and Performance Acceptance Test.</p>	<p>We understand that Price Reduction Schedule shall be calculated excluding GST.</p> <p>Please confirm if our understanding is correct</p>	<p>Refer clause 16.2 of SCC.</p> <p>The PRS shall be calculated on Invoice value inclusive of all taxes and duties.</p>
2	Commercial Volume - IFB	13 OF 104	11	<p>11.1 All bids must be accompanied by a bid security of amount <b>Rs. 20,00,000/- (Rupees Twenty Lakh only)</b>.</p> <p>11.2 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..... from scheduled date of bid submission.</p> <p>11.3 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.</p> <p>Account No. 200999031485 IFSC INDB0000005 MICR No. 110234002 Bank Name Indusind</p>	<p>We shall be submitting requisite EMD by way of Bank Guarantee.</p> <p>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</p>	<p>Account details for EMD by way of Bank Guarantee:</p> <p>Account No. 200999031485 IFSC INDB0000005 MICR No. 110234002 Bank Name Indusind</p>
3	Commercial Volume - SCC	60 of 104	15.7	<p>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</p>	<p>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</p>	<p>Account details for CPBG (Post Award of contract) by way of Bank Guarantee:</p> <p>ICICI Bank IFSC- ICIC0000007, Branch CONNAUGHT PLACE , DELHI</p>
4	Commercial Volume - SOR	75 of 104	1.1 a)	<p>String test of complete compressor package along with gas engine and accessories at packagers' factory.</p>	<p>We understand that word gas engine stated in referred clause to be read as Electric Motor</p> <p>Please confirm if our understanding is correct</p>	<p>Bidders Understanding Is Correct</p>
5	Commercial Volume - SOR	75 of 104	1.1	<p>Supply – 36 nos. Freight – 36 nos. Installation &amp; Commissioning – 36 nos. Re-transportation charges -8 nos.</p>	<p>We understand that 36 nos. qty towards Supply, Freight and I&amp;C charges stated in SOR to be read as 18 nos. each</p> <p>We understand that 8 no qty towards re-transportation charges stated in SOR to be read as 5 nos.</p> <p>Please confirm if our understanding is correct</p> <p><b>Please confirm if our understanding is correct</b></p>	<p>Bidders Understanding Is Correct</p> <p>Refer Revised Schedule of Rates</p>

6	Commercial Volume - SOR	78 of 104	3.2.2 to 3.2.10	Note: Fixed annual maintenance in terms of percentage of unit rate of Item no. 1.1+1.2+2.1 quoted by the bidder shall be in the range of 04% to 10%.	We understand that SOR is protected and will derive the final amount automatically on the basis of 1st year quoted O&M prices and note as stated in SOR serial no. 3.2.2 to 3.2.10 i.e. Fixed annual maintenance in terms of percentage of unit rate of Item no. 1.1+1.2+2.1 quoted by the bidder shall be in the range of 04% to 10% not be considered  Please confirm if our understanding is correct	Refer clause no. 24.3 - REASONABILITY OF RATES of SCC Bidders to maintain the same only for 1st year rate at line item 3.2.1.
7	Commercial Volume - SOR	83 of 104	11	<b>Please note that prevailing minimum wages of Rs. 816 per shift has been considered for Operations portion of this tender</b> <b>Note:</b> Minimum wage component is indicated in SOR for reference purpose only, however, minimum wages (prevailing at the time of execution) of respective state/ Central (whichever is higher) shall be payable to workmen engaged for operations on actual basis. Bidder shall be quoting additional charges (which shall include but not limited to – Uniform charges, conveyance, PPE, Mobile, ID card & Profit of margin of bidder) over & above min. wage component. The minimum wage component shall not be considered in evaluation & comparison of bids and only additional charges shall be considered for calculation of NPV.	We understand that along with the minimum wages applicable, statutory payables shall be reimbursed by purchaser.  Please confirm if our understanding is correct	Tender Condition Prevails
8	Commercial Volume - SOR	82 of 104	4.2 (E2)	H = Cost of Natural Gas per Kg @ Rs. 56/- per kg Engine Fuel Consumption (F)	We understand that H = Cost of Natural Gas per Kg @ Rs. 56/- per kg to be read as H = Cost of Energy @ Rs. 12/KWH as stated at page 28 of 104 of commercial volume.  Since the SOR is protected and non-editable, we request to share the revised SOR considering Rs. 12 / KWH in formula stated in column 6 and Text "Energy Consumption (KWH)" in column 9	Refer Revised Schedule of Rates
9	Commercial Volume - SOR	7 of 104	3.4	After expiry of 1st year Operations and Comprehensive Maintenance period (during warranty), IGL reserves the right to extend the contract and separate work order on OEM basis for each year will be awarded for the services of Operations & Comprehensive Maintenance (including major overhauling) for the period of 2nd to 5th Year (4 years): • To derive rates of Comprehensive Maintenance & additional charges for Operation from 2nd to 5th Year, 5% escalation Year on Year basis shall be considered on quoted/negotiated rates of 1st Year.	We understand that: • To derive rates of Comprehensive Maintenance & additional charges for Operation from 2nd to 5th Year, 5% escalation Year on Year basis shall be considered on quoted/negotiated rates of 1st Year • 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 • 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 shall be considered	Refer Revised Schedule of Rates
10	Commercial Volume - SOR	8 of 104	3.5	Further, after expiry of Operations and Comprehensive Maintenance period (2nd to 5th year), IGL may extend the contract for the period of 6th to 10th Year at its sole discretion and accordingly separate contract will be awarded for providing the Operation and Comprehensive Maintenance (including major overhaul) services for another five years i.e. 6th to 10th year: • 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. • 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.	As per SOR in excel, bidders need to fill 1st year rates under Operation (only additional charges payable except minimum wages) & 1st Maintenance charges. From 2nd to 10th Years the cells are protected for editing and auto calculated. It is observed that: 1. SOR is calculating 5% for Operations & Comprehensive Maintenance for 2-10 years instead of 10% for 6-10 year 2. The total sum of Comprehensive Maintenance is calculated for 1-5 years and not for 1-10 years. The same may be corrected.	Refer Revised Schedule of Rates
11	Technical Volume	31 of 128	7.1	Bidder shall guarantee 1200 SCMH capacity of compressor with given gas composition, at suction pressure of 16 kg/cm2(g) and at suction temperature of 300 C.....(g) with no negative tolerance for errors in instruments and measurements.	We understand that 300 C to be read as 30 Deg C.  Please confirm if our understanding is correct	Bidders Understanding Is Correct

12	Technical Volume	33 of 130	B	<p>Calculation for Energy Consumption &amp; Package Gas loss The compressor package shall be ..... of electric motor (KWH) should be ..... &amp; tackles, erection and commissioning will be calculated as per following formulas: F = G x H x I x N Where, F = amount in Rs. G = Bidder's Energy Consumption rate quoted in Kg/hr for every 1200 SCMH (438 Kg) of CNG produced H = Cost of Natural Gas per Kg @ Rs. 56/- per kg I = Avg. no. of running hours per year i.e. @ 5475 hours N = Number of machines Note-1: For Energy Consumption ..... no benefit will be given below 137 KWH. Note-2: The amount (F) as .....on NPV basis with rate of interest @10% p.a.</p>	<p>We understand that H = Cost of Natural Gas per Kg @ Rs. 56/- per kg to be read as H = Cost of Energy @ Rs. 12/KWH as stated at page 28 of 104 of commercial volume.  Please confirm if our understanding is correct</p>	Refer Corrigendum - II
13	Technical Volume	50 of 130	14.1	<p><b>Parameters at Suction pressure of 14 Kg/ Cm2 (g); Compressor Capacity by Bidder:</b> 7 - Power Consumption of Package in KWH for 1200 SCMH delivery</p>	<p>We understand that Power Consumption of Package in KWH shall be defined by bidders corresponding to flow at Suction pressure of 14 Kg/ Cm2 (g) and not on 1200 SCMH delivery  Please confirm if our understanding is correct</p>	Refer Corrigendum - II
14	Technical Volume	51 of 130	14.3	<p><b>Parameters at Suction pressure of 19 Kg/ Cm2 (g); Compressor Capacity by Bidder:</b> 7 - Power Consumption of Package in KWH for 1200 SCMH delivery</p>	<p>We understand that Power Consumption of Package in KWH shall be defined by bidders corresponding to flow at Suction pressure of 14 Kg/ Cm2 (g) and not on 1200 SCMH delivery  Please confirm if our understanding is correct</p>	Refer Corrigendum - II
15	Technical Volume	50 of 130	14.2	<p><b>Guaranteed parameters at Suction pressure of 16 KG/CM2(g); Compressor Capacity required = 1200SCMH</b> Compressor capacity in SCMH at suction pressure of 14kg/cm2(g), discharge pressure of 250 kg/cm2(g) and gas inlet temp 30 0 C (No -ve tolerance);</p>	<p>We understand that 14kg/cm2(g) under serial no. 1 Guaranteed parameters at Suction pressure of 16 KG/CM2(g); Compressor Capacity required = 1200SCMH to be read as 16 kg/cm2(g).  Please confirm if our understanding is correct</p>	Refer Corrigendum - II
16	Technical Volume	51 of 130	14.3	<p><b>Parameters at Suction pressure of 19 Kg / Cm2 (g); Compressor capacity by Bidder:</b> Compressor capacity in SCMH at suction pressure of 14kg/cm2(g), discharge pressure of 250 kg/cm2(g) and gas inlet temp 30 0 C (No -ve tolerance);</p>	<p>We understand that 14kg/cm2(g) under serial no. 1 Parameters at Suction pressure of 19 Kg / Cm2 (g); Compressor capacity by Bidder: to be read as 19 kg/cm2(g).  Please confirm if our understanding is correct</p>	Refer Corrigendum - II
17	Technical Volume	12 of 130	1.6	<p>Impulse and pneumatic piping/Tubing for all valves, fittings as specified &amp; required for mounting the instruments. Block and bleed valves to be provided for Pressure gauges (including DPG) and pressure Transmitters</p>	<p>We understand that Block and bleed valves to be provided for Pressure gauges (including DPG) and pressure Transmitters  Please confirm if our understanding is correct</p>	Necessary valves desired shall have features of double block & bleed valve
18	Technical Volume	84 of 130		<p>Service factor of main motor</p>	<p>We understand that service factor of main motor to be considered as 1.0  Please confirm if our understanding is correct.</p>	Bidders Understanding Is Correct
19	Technical Volume	84 of 130		<p>Barriers in instrument signals</p>	<p>We understand that Barriers in instrument signals are required  Please confirm if our understanding is correct</p>	Bidders Understanding Is Correct
20	Technical Volume	125 of 130	1.1	<p>1.1. ELECTRIC MOTORS a) The compressor motor shall be selected such that at the greatest BKW (Brake Horsepower) required by compressor, other auxiliaries and the losses under any of the compressor operating conditions, motor rating shall be minimum 110% of the greatest BKW required by the compressor in normal range of operation.</p>	<p>We draw reference from Note-1: stated at page 33 of 130 "For Energy Consumption quoted by the bidder under guaranteed parameters, no benefit will be given below 137 KWH"  We understand that 110% of 137 kwh translates to 150.7 KWH. The next higher size of main motor is 160 kw. Accordingly, bid requires minimum 160 kw motor to be considered for package.  Please confirm if our understanding is correct</p>	Bidders Understanding Is Correct
21	3.4 & 3.5 IFB - Vol I / 24 reasonability of rates			<p>TYPE AND DURATION OF CONTRACT</p>	<p>The ten years O&amp;M period shall be firm and awarded to bidder in totality. Alternatively, IGL can confirm firm O&amp;M period for the first 5 years, and for 6th &amp; 7th year we propose 15% escalation, and 20% escalation for 8th, 9th &amp; 10th on YoY basis.</p>	Tender Condition Prevails

22	2.2 IFB - Vol I / 23.2. 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. 23.2 of SCC
23	4.0 IFB - VOL I			Delivery Schedule	Kindly modify delivery period of first Lot of 16 m/c's 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
24	VOL I GCC / SCC			13.0 CONTRACT-CUM-EQUIPMENT PERFORMANCE BANK GUARANTEE	BG should be considered seperately 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
25	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
26	20 - GCC / 23.1 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 indivual 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 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
27	26 GCC / 22 & 31 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

28	29 GCC / 31 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 <b>BALANCE UNDELIVERED PORTION</b> value only.</p>	Tender Condition Prevails
29	60 GCC - VOL I / 41 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 &amp; 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 &amp; 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. 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 &amp; 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 &amp; 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 &amp; 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
30	VOL I SCC - 6			Inspection & Tests	Kindly approve Gulf Lloyds Industrial Services (INDIA) PVT. LTD. third party inspection agency. They are approved by PNGRB.	Noted

31	19 SCC / VOL I			<p>Through direct payment within 45 days from date of receipt of invoice. Payment towards supply, transportation, loading &amp; unloading of Compressor Units at IGL site/store at NCT of Delhi &amp; NCR Region, Installation, commissioning with commissioning spares &amp; 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 &amp; 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 <b>30 days</b> 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) &amp; dispatch clearance issued by the Owner.</p> <p>ii) 10% (Ten Percent) Payment shall be released within <b>60 days</b> 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
32	24 SCC VOL I			REASONABILITY OF RATES	<p>Kinldy consider the firm CAMC for 5 years only for contract. For 6th &amp; 7th year we propose 15% escalation, and 20% escalation for 8th, 9th &amp; 10th on YoY basis.</p>	Tender Condition Prevails
33	24 SCC VOL I			REASONABILITY OF RATES	<p>Kinldy consider the FIRM Operation for 5 years only for contract. For 6th &amp; 7th year we propose 15% escalation, and 20% escalation for 8th, 9th &amp; 10th on YoY basis. 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
34	7.3.1 VOL II			PENALTY TOWARDS EXCESS GAS CONSUMPTION	<p>The value of ' G ' shall be combination of below conditions ::</p> <p>( 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.</p> <p>( 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.</p>	Tender Condition Prevails
35	7.3.2 VOL II			PENALTY TOWARDS EXCESS POWER CONSUMPTION	<p>Machine is subjected to intermittent start / stops based on the load &amp; 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 &amp; same should be compared with quoted figure to impose penalty.</p>	Tender Condition Prevails

36	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
37	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
38	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
39	10 VOL II			FIELD TRIAL RUN (Commissioning and Commercial Operation)	Kindly accept field trial run for only Four (4) hours cumulative basis.	Noted
40	13.0 - VOL II			OPERATION & MAINTENANCE SERVICES 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	Request site acceptance test (PT) to be conducted immediately after commissioning of equipment is completed.	Tender Condition Prevails
41	4.1.5			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
42	4.2.3			Compressor maximum vibrations at cylinders and at frame shall not exceed 10 mm /sec. And 5 mm/s respectively unfiltered peak velocity. The Bidder shall provide for all structural support within the package so that these levels can be achieved.	Will be as per Manufacturer's Proprietary Design Standards and limited to as per industry norms.	Tender Condition Prevails

43	4.4.1			All oil wiper intermediate gas cylinder pressure packing shall be a segmental ring with stainless steel garter springs. The pressure packing case shall be provided with a common vent and drain below the piston rod tube to the outside of the Package enclosure. In case pressurized crack case type design, the clauses of this tender which are not applicable due to inherent design will be acceptable. However, contractor has to furnish the published design data/document of the compressor.	Will be as per Manufacturer's Proprietary design standard.	Tender Condition Prevails
44	4.4.2			ERW/ seamless steel tubing conforming to ASTM A-192 or series 300 SS tubing conforming to ASTM A-269 with minimum thickness as specified in Cl. 7.11 of API-11P shall be used for vent piping.	Pressurized crankcase and hence not applicable	Tender Condition Prevails
45	4.8.2			<b>Inter / After Gas Coolers</b> 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 <sup>2</sup> . 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 cooler sizing calculation for review/ records.	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.
46	6.2			<b>Mechanical running test (MRT)</b> 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. - Vibration levels measured on cylinders and frame - Bearing temperature - Oil cooler inlet and outlet temp - Sound level 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.  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  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. All the interlocking and performance of the instrumentation system will be verified during the MRT.	MRT will be carried out as per Manufacturer's Proprietary design std.  following shall not be feasible during FAT • Bearing temperature- Not applicable for Flp. motors • Oil cooler inlet outlet temperature not considered. • Sound level- Not feasible to unavailability of free field.  Strip test-As it is not possible to disassemble any part pf the compressor Package after assembly & Testing	Tender Condition Prevails
47	6.3			Mechanical String Test	Test will be limited to witness of Performance Parameters as per Factory Acceptance Test (FAT) at full load on CNG fuel, However The test will not comprise of disassembly of any of component of Package for witness.	Tender Condition Prevails
48	1.6			Gas meter (2 nos.): Mass flow meter (with integral local display to measure gas flow at package 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. Additionally, Thermal type mass flow meter to be provided to measure package gas loss/vent.	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



49	1.6			Common structural steel skid for the compressor- electric motor and for all auxiliary systems.	All auxiliaries like CO2, Air compressor, PRS Skid etc will be supplied loose & to be mounted away from package.	Noted
50	1.6			Coupling/V-belts/pulleys.	V-belts/ pulleys not applicable as direct driven machine.	Noted
51	1.6			Each stage outlet temperature before cooler & after cooler to be displayed on PLC.	Each stage temp before cooler & after cooler will be displayed on Gauge panel. In addition to this Temperature Transmitter provided at for PLC display to monitor temp at each stage. 1) Compressor suction 2) 1st stage discharge 3) 2nd stage discharge 4) 3rd stage discharge 5) Aftercooler outlet	Tender Condition Prevails
52	1.6			Gas flow directions to be marked "Gas In/ Gas out "with cylinder stage No. on all the inlet outlet tubes inside compressor package.	Arrow mark will be provided for flow directions, as same is not feasible due to tube size.	Noted but cylinder stage No. to be provided
53	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	Tender Condition Prevails
54	1.6			Following documents shall be submitted by the successful bidder Pressure vessel thickness calculations to be submitted.	Pressure vessel thickness calculation is our propriety so not feasible to submit.	Tender Condition Prevails
55	1.6			All exposed rotating parts shall be provided with adequate guards of non-sparking type.	Adequate protection as per Manufacturer's Proprietary designstandards shall be provided.	Tender Condition Prevails
56	1.6			The Compressor Package shall trip if any of the enclosure is opened while the machine is running.	Due to uninterrupted running of machine same is not recommended by OEM.	Tender Condition Prevails
57	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. Air compressor preferably of IR/KPCL/Elgi/CP make having capacity of approx 10 kg/cm (g) discharge pressure (with minimum flow rate of 10 CFM), and 500 water liter capacity. 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 500 WL 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 recommend bypassing of the dryer which will lead to consequential failure of air starter.	Tender Condition Prevails
58	2.1.7			Purchaser shall provide UPS (220 □1 % V, 50 □1 % Hz) for control supply requirements at a single point (feeder in UPS ACDB) inside the electrical room. Bidder shall indicate power/ feeder (KW/Amp) requirement in the offer. Surge protection devices of approved make shall be provided for all incoming supply to Bidder's end.	we have excluded UPS from our scope. Kindly confirm the same.	Tender Condition Prevails
59	2.2.4			As and where specified on the data sheets all vents (i.e. Relief valve, distance piece and packing) shall be manifolded and terminated at skid edge outside the enclosure and vented to safe height of 3 m at package roof.	Distance piece will be as per Manufacturer's Proprietary design standard. Venting is not applicable due to pressurised crankcase.	Tender Condition Prevails
60	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
61	2.2.6			UPS and Non UPS power shall be made available from power distribution board (PDB) in the electrical room. Supply, Erection and termination of all cables and accessories from feeder in electrical room shall be in the bidder's scope.Approx distance of the CNG compressor package shall be 100 m from electrical room.	All field cables will be in the scope of IGL	Tender Condition Prevails

62	2.2.7			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 in the scope of IGL	Tender Condition Prevails
63	2.2.8			Electronic earth pit shall be made available at a distance of about 5 meters from compressor package. Cable from this earth pit shall be in the bidder's scope. Owner's earthing main ring shall be made available at compressor foundation. Cable to control panel body earth inside the compressor package shall be in the bidder's scope.	All field cables will be in the scope of IGL	Tender Condition Prevails
64	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 with auto drain system over manual drain system considered for safety reasons, only ORV with manual drain considered. Drain system will be time bases as per Manufacturer's Proprietary design standard offering.	In case of proprietary design of the offered compressor, the same can be accepted subject to submission of PTR of the offered compressor
65	4.9.3			Scrubber service class - B shall be used for Inter-stage / discharge scrubbers. Service Class - C shall be used for suction scrubber. (Refer API -11P)	Suction KOD as per Manufacturer standard design will be provided.	In place of U stamping, bidder may get all the vessels after approved TPI inspection.
66	4.1			Pulsation, Vibration Control and Analog Study	Not feasible to be provided due to manufacturer's proprietary design conditions.	Tender Conditions Prevails Please refer the clause 4.10.1, Technical Volume - II of subject tender.
67	4.12.1			The maximum allowed temperature within the enclosure shall be 5°C above ambient temperature. Adequate arrangements shall be provided to meet the above.	Tempreture inside canopy = Ambient + 8 Deg	Tender Condition Prevails
68	4.12.3			Heat Exchanger / gas cooler fan shall have mechanical drive only and the same cannot be utilized as ventilation fan.	Gas cooler fan is electric motor driven as per previous supplied packages.	Noted
69	4.12.7			All the pressure, temperature, gas flow meter, oil level, lube oil pressure, coolant temperature, coolant level indicators shall be visible from outside of enclosures. enclosures as per the design of the manufacturer through gauge panel. However if due to space constraint some of the Instruments not visible from outside of enclosure then proper accessibility has to be provided for reading the parameters from the Instruments. The Flow meters shall be installed in such a way that if required reading can be taken safely on running of compressor during performance testing.	All the indicators for pressure, temperature of gas shall be visible from outside of enclosures. For rest of the parameters same can be viewed from PLC/locally.	Tender Condition Prevails
70	4.12.10			For handling of all heavy parts for maintenance purpose lifting arrangement i.e. beam fitted with chain hoist shall be provided in enclosure.	Due to space constraints inside canopy it is not possible to install Beam fitted with chain hoist. Instead, suitable lifting arrangement provision shall be offered at site as per requirement to remove any heavy parts. . Kindly accept.	Noted
71	4.12.11			One vent line with double isolation valve shall be provided to emptying the package at 3rd stage separator.	Due to safety reason vent line not provided at 3rd stage separator, venting prvision is provided at BDV with double isolation valve	Tender Condition Prevails
72	4.12			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.	Noted & will be reviewed during detailed engg. & may be accepted if found technically suitable.
73	4.12			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 consedered same.	Tender Condition Prevails
74	4.13.5			The instrument air tubing material shall be SS316 as per ASTM A269.	Instrument air tubing shall be SS304.	Noted

75	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 Conditions Prevail.
76	6			INSPECTION AND TESTING	Inspection & Testing will be as per Approved QAP by Customer	Noted
77	8			PAINTING AND PROTECTION	Painting shall be as per Manufacturer's Proprietary designstandrad procedures. Package enclosure shall be Powder Coated ensuring longer durability in all weather out door installation conditions.	Tender Condition Prevails
78	8.5			Packing shall be sufficiently robust to withstand rough handling during ocean shipment & inland journey. Sling points shall be clearly indicated on crates.	The canopy is weather proof so no separate packing considerd. Package shall be covred in tarpaulin during road shipment.	Tender Condition Prevails
79	1.1.7.3 iv.			The design of control panel shall incorporate provision for expansion by installing adequate spare capacity. Each panel shall be designed to accommodate the following additional equipment, as a minimum; a) 20% of panel front/inside mounted instruments including lamps, push buttons, switches, relays etc. b) 20% additional power feeders each provided with switch fuse assembly. c) 20% spare cable entry points. d) 20% spare TBs with fuses shall provide	Spare I/O shall be as per approved Control Panel drawing approved by Customer	Tender Condition Prevails
80	1.2.6.			PLC shall be of modular in construction with redundant CPU with EEPROM, redundant interface module, redundant power supply for CPU and HMI, redundant power supply for load , non redundant I/Os , communication cards for connecting mass flow meter, communication card card/port for future SCADA connectivity. The selected I/O shall have 20% spare capacity for future use. Diagnosis feature shall be available in CPU and I/O used in PLC. Mounting of PLC components such as CPU, HMI, I/Os in one JB and power supply relay barriers/isolators, fuses, MCB, electrical earthing bus bar in other JB. PLC components / system shall be tropicalised, adopted with complete wiring and necessary terminals. Wiring to be color-coded with cross printed ferruling in position. Mass to volume calculation is not required; however, bidder shall provide a soft tag for entering standard density upto 2 decimal point with the help of external push button in PLC for converting mass flow rate to volume flow rate. PLC shall be configured as a remote terminal unit of supervisory computer and data acquisition system complete with dial up connectivity. PLC shall be capable of carrying out on line routines for at least ten separate loops without affecting the scan, cycle & up dating time etc.	Spare I/O shall be as per approved Control Panel drawing approved by Customer.	Tender Condition Prevails
81	1.8.			Electrical cables: 1.8.1 Following cables shall be supplied and laid by bidder for flame proof control panel: a) From PDB to compressor control panel b) From compressor to hooter and upto ESD push button in operator room. a) From PDB to air compressor. 1.8.2 Following cables shall also be supplied, laid and terminated by bidder: a) Power and signal communication cables from compressor to trailer panel, if trailer is indicated in SOR (distance 20 m approx). b) Cables inside the compressor package 1.8.3 Termination of cables in compressor control panel including cable lugs and double compression cable glands etc. is in bidder's scope.	All field cables will be in the scope of IGL. It is not possible for bidder to supply the cables as the length of field cables are not defined in tender and bidder has to bear extra cost due to this during site commissioning.	Tender Condition Prevails
82	1.9.4.			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 Conditions Prevails

83	1.9.6.			Separate junction boxes shall be provided for each type of signal i.e., analog, digital, solenoids, RTD thermocouple and power supply. Instrument junction boxes should not have any high voltage connection.	LCP (With PLC) is mounted on package itself hence separate JB's are not required.LCP (With PLC) is mounted on package itself & also separate gauge box will be used for intrinsically safe signals.	Direct run cable upto PLC/ local panel, Junctions box is not required; rest tender condition prevail.
84	1.9.16.			Vendor has to calibrate all instruments including mass flow meter and perform pressure vessel testing within 1 month of compressor commissioning. Vendor has to provide calibration certificates to respective Control room Incharge within 1 week from the calibration date.	Calibration of all instruments will be carried out as recommended by OEM.	Tender Condition Prevails
85	1.9.17.			Certification Bidder shall provide certificates (from BASEEFA FM, UL, PTB, LCIE etc.) from country of origin for all intrinsically safe/flameproof protected by other methods equipment/instrument/systems, which are manufactured outside India. If required, bidder shall provide necessary ertification/approvals/authentication, for all such intrinsically safe/flameproof equipment/instrument/systems, by the Indian authority–Chief Controller of Explosive (CCOE)/PESO, Nagpur, India.	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.	Tender Condition Prevails
86	1.9.18.			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 xv. RPM indicator shall be in gauge panel	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 xv. RPM indicator shall not be in gauge panel	Tender Condition Prevails
87	1.9.18.			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: xii. Low fuel pressure xiii. Flow through the vent line	xii. Low fuel pressure - Not applicable xiii. Flow through the vent line trip logic not considered.	xii. Noted Rest Tender Condition Prevails
88	1.9.18.			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.	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 Conditions Prevails
89	1.9.18.			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 with100% redundancy with respect to CPU, Power supply, Interface.	100% redundancy shall be provided only for CPU. Kindly accept	100% redundancy with respect to CPU, Power supply must be considered. Rest Tender Conditions Prevails
90	ANNEXURE -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. 42. Final Disch Pressure after coalescent filter *- Low alarm and trip not considered. 53. Temp before and after Air cooler- Each stage Outlet temp and for after coollet before after will be provided. *Smart type pressure transmitter at suction and discharge shall not be considered. Piezo resistive type will be provided.	Tender Condition Prevails

91	21		<p><b>1. QUALITY ASSURANCE PLAN:</b></p> <p><b>2. Compressor</b> Hydrotest of – cylinder</p> <p><b>3. Heat Exchangers (at sub-vendor works)</b> WPS / PQR – Welder Qualification</p> <p><b>4. Control Panel &amp; Variable Frequency Drive</b> Dimensions / visual as per drawing Functional test</p>	<p>1. Inspection &amp; Testing will be as per Approved QAP</p> <p>2. Hydrotest for 1st stage and 2nd stage cylinder only shall be considered.</p> <p>3. Welding is not applicable.</p> <p>4. Functional test during FAT.</p>	Noted
92	26		<p><b>Preferred makes</b></p> <p><b>1. Block and bleed valve</b></p> <p><b>2. ON OFF Ball valve</b></p> <p><b>3. Discharge Filter</b></p>	<p>Shall be as per final approved vendor list. Kindly approve below makes :</p> <p>1. Baumer</p> <p>2. Manufacturer's Proprietary design approved make</p>	Please refer to Note – 1 & Note – 2 of Preferred Makes List. Tender Conditions Prevails
93	Page no. 65		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
94	Page no. 65		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
95	Page no. 7		7.1 Bidder shall guarantee 1200 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
96	Page no. 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
97	Page no. 32		<p>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 &amp; 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, erection &amp; commissioning, operations and comprehensive maintenance will be calculated as per following formulas: <math>F = G \times H \times I \times N \times W</math></p>	Instrument error/instrument accuracy shall be consider as per OEM recomandation for gas loss penalty	Tender Condition Prevails
98	Page no 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: $F = 1.2 \times [(G - (Q * D)) * H]$	Instrument error/instrument accuracy shall be consider as per OEM recomandation for gas loss calculation	Tender Condition Prevails

99		Page no 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
100		Page no 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: $F = 5 \times \{(1200 \times H \times RD \times AD) - M\}$	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
101		Page no 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
102	TYPE AND DURATION OF CONTRACT	7 Of 104 8 Of 104		3.4 After expiry of 1st year Operations and Comprehensive Maintenance period (during warranty), IGL reserves the right to extend the contract and separate work order on OEM basis for each year will be awarded for the services of Operations & Comprehensive Maintenance (including major overhauling) for the period of 2nd to 5th Year (4 years): To derive rates of Comprehensive Maintenance & additional charges for Operation from 2nd to 5th Year, 5% escalation Year on Year basis shall be considered on quoted/negotiated rates of 1st Year. 3.5 Further, after expiry of Operations and Comprehensive Maintenance period (2nd to 5th year), IGL may extend the contract for the period of 6th to 10th Year at its sole discretion and accordingly separate contract will be awarded for providing the Operation and Comprehensive Maintenance (including major overhaul) services for another five years i.e. 6th to 10th year: <b>For Operations:</b> 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. <b>For Comprehensive maintenance services:</b> To derive rate for sixth and subsequent years (6th to 10th year), 10% annual escalation on derived rate of 5th Year to be considered.	As per clause 2nd to 5th year of O&M - 5% Escalation on year to year basis. 6th to 10th year year of O&M - 10% Escalation year to year basis. But in SOR for 600 SCMH and 1200 SCMH tenders O&M is being calculated as 5% on year to year basis escalation from 2nd to 10th year. Please review the SOR for both the tenders and kindly correct it according to the said tender clause.	Tender Condition Prevails

103	BIDDER EVALUATION CRITERIA (BEC)	10 of 104		The bidder shall be a regular manufacturer/ packager of reciprocating gas compressor packages of 1200 SCMH or higher capacity handling hydrocarbon gas with single point responsibility. The bidder, in the previous seven (07) years reckoned from the tender issue/publish date, shall have engineered, manufactured/ packaged, tested and supplied to customer(s), CNG compressor packages of 1200 SCMH or higher capacity, with discharge pressure of 250 kg/cm2, from the proposed facility of manufacturing/ packaging, as per following: (i) Single order of at least 5 Nos. of CNG compressor packages of 1200 SCMH or higher capacity.	We request you to modify BEC clause as per following 8.1 The bidder shall be a regular manufacturer/ packager of CNG compressor packages of 500 SCMH or higher capacity handling hydrocarbon gas with single point responsibility. 8.2 The bidder, in the previous seven (07) years reckoned from the tender issue/publish date, shall have engineered, manufactured/ packaged, tested and supplied to customer(s), CNG compressor packages of 500 SCMH or higher capacity, with discharge pressure of 250 kg/cm2, from the proposed facility of manufacturing/ packaging, as per following: (i) Single order of at least 9 Nos. of CNG compressor packages of 500 SCMH or higher capacity.	Tender Condition Prevails
104	SCHEDULE FOR SUPPLY OF STORES / WORKS	08 of 104		Delivery Period for <b>1st lot – Within 12 weeks</b> on ex-works basis from date of LOA / first notification of award from IGL.  Note: Delivery period for subsequent lots shall be 12 weeks from the date of first intimation	We request your acceptance on Ex works delivery of 24 week from date of drawing approval of 1st Lot.  Furthermore, please let us know subsequent lot size and request your acceptance on Ex works delivery for subsequent lots will be 24 weeks from date of first intimation.	Tender Condition Prevails
105	Terms of Payments	61 of 104		Terms of Payments  Through direct payment within 45 days from date of receipt of invoice.	We request you to keep payment terms as below  Through direct payment within 30 days from date of receipt of invoice.	Tender Condition Prevails
106	SOR	75 OF 104		1.1 Supply Discription a) String test of complete compressor package along with <b>gas engine</b> and accessories at packagers' factory.	Please confirm " String test of complete compressor package along with <b>Electric Motor</b> and accessories at packagers' factory."	Refer revised SOR
107	General				We request you to please define subsequent lot quantity	1st lot quantity are defined in tender document.  Since it is ARC for 1 year, remaining lots will be as per IGL requirement.
108	General				We request you to please provide us exact location and delivery address.	Exact location & address will be provided before dispatch of each compressor package.
109	General	-	-	-	In SOR for 600 SCMH and 1200 SCMH H = Cost of Energy @ Rs. 12/ KWH but in Column F59 to F68 - 56 is considered - we request you Share us revised SOR with necessary corrections	Refer Revised Schedule of Rates
110					We request you to kindly extent the tender by 3 Weeks.	Refer Corrigendum - II
111	Notes to Material Requis	6/130		For Operation Charges of 1st Year i.e. MR Item 3.1, bidder to quote only additional charges (per-shift) payable over and above minimum wages of workmen (Semi-skilled labour). Rates of Wages including VDA for semi-skilled labour for construction industries per day (in Rupees) of Centre/ State whichever is higher, shall be payable to workmen engaged for operations on actual pro-rata basis.	We understand minimum wages as per respective states will be applicable, similar to previous tenders, please confirm	Please refer to Note - 6 of MR in Technical Volume-II
112	Notes to Material Requis	6/130		To derive rates of Comprehensive Maintenance & additional charges for Operation from 2nd to 5th Year, 5% escalation Year on Year basis shall be considered on quoted/ negotiated rates of 1st Year.	minimum 10% escalation to be should be kept as per clause no 9, page 8/130, OR If the minnum wages increased by the authorities more than 5% in a peticular year, the difference amount beyond 5% shall be compensated Kindly confirm	Tender Condition Prevails
113	1.6 SCOPE OF SUPPLY FOR EACH COMPRESSOR PACKAGE	12/130		Inlet twin suction gas filter / Duplex suction filter of filtration level up to 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 up to 5 micron shall be installed in the inlet pipe after the isolation valve by the contractor at the battery limit.	As the required duplex suction filter is for 5 micron, the conical/ Y strainer filtration need to be heigher than 5 micron. Generally stainers provide filtration upto 50 micron, Kindly confirm	Tender Condition Prevails

114	4.1.3 4.0 BASIC DESIGN	21/130		The gas pressure in the inlet pipe at the battery limit varies from 14kg/cm2(g) to 49 kg/cm2(g).	We understand the suction pressure range is 14 to 19 kg/cm2 Kindly confirm	Tender Condition Prevails
115	4.9.9 Separators & Oil Ref	25/130		The filters shall be sized to flow min. 200% of the flow at suction pressure of 19 kg/cm2(g) and discharge pressure of 250 Kg/cm2 (g).	200% of rated of the filter will make it over sized and bulky, 120% of the rated capacity will suffice the requirement	Tender Condition Prevails
116	8 PAINTING AND PRO	35/130		PAINTING (PRIMER & FINISH COAT)	The canopy shall be powder coated, which is superior to paint job	Noted
117	Guaranteed parameter 14.1, 14.2, 14.3	49/130 50/130 51/130		Compressor capacity in SCMH at suction pressure of 14kg/cm2(g), discharge pressure of 250 kg/cm2(g) and gas inlet temp 30 OC (No -ve tolerance):	We understand the suction pressure in clause 14.1 is 14 kg/cm2, and in 14.2 is 16 kg/cm2 14.3 is 19 kg/cm2	Refer Corrigendum - II
118	PREFERRED MAKES	78/130		FLP Switchgear	Kindly permit Saai Electrica	Please refer to Note – 1 & Note – 2 of Preferred Makes List. Tender Conditions Prevails
119	PREFERRED MAKES	78/130		Air exchanger	Kindly allow Process equipments make air exchangers	Please refer to Note – 1 & Note – 2 of Preferred Makes List. Tender Conditions Prevails
120	General			Block and bleed valves to be provided for Pressure gauges (including DPG) and pressure Transmitters.	Kindly allow using needle valve instead of block & bleed valve	Necessary valves desired shall have features of double block & bleed valve
121	General			Each stage outlet temperature before cooler & after cooler to be displayed on PLC.	Temperature transmitter will be installed at each stage outlet before cooler and final stage stage after cooler. Moreover Temperature gauge will be provided at each stage after cooler, Kindly permit	Tender Condition Prevails
122	General			Air Compressor Motor shall be FLP type 4 pole Induction motor and suitable for hazardous areas shall have protection Ex (d) as per area classification(Class-I, Division I, Group D as per NEC or Zone I, Group II A/ II B as per IS/ IEC).	Air compressor is to be installed outside hazardous zone, therefore standard starter will serve the purpose, Kindly permit	Tender Condition Prevails
123		8	3	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. 2. 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.	"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."	Tender Condition Prevails
124		42	29	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 "supply portion for the quantity" OR "the work portion" that is delayed per complete week subject to maximum of 5% (Five Per Cent) of the total contract value.	Please note as the order is released on the Lot basis, the reduction should be on undelivered portion of the individual delivery order value and not on the total order value. Also, please note this is applicable to only supply price. In case the delivery order is for both supply and AMC service then only for supply of package should be applicable and AMC service value shall not be considered for reduction.	C&P to Reply
125				GA wise location.	We intend to have site locations or GA wise locations in order to prepare for operation & maintenance charges .  Also Specify wages to be considered for operation . state or central ?	Kindly refer to MR for tentative GA locations. Particular sites will be within the mentioned GA locations & may change as per IGL requirement.  Kindly refer to Note 6 of MR for minimum wages.
126		6	9	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. 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	"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."	Tender Condition Prevails



127		12	1.6	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.	Please note 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	Direct run cable upto PLC/ local panel, Junctions box is not required; rest tender condition prevail.
128		12	1.6	Inlet twin suction gas filter / Duplex suction filter of filtration level up to 5 micron with oil drain valve, differential pressure gauge and temporary suction line strainer at the package inlet and at other stage (if required).	Please note Duplex suction gas filter with oil drains and temporary suction inline strainer will be placed outside the package as the compressor package inlet. This system is available in all our packages and accepted by all the CGD companies and 600+ CNG compressor are running successfully.	Noted
129		12	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.	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
130		12	1.6	Y- type strainers, valves, sight flow indicators, check valves with check valves protector, manual drain/ traps etc. as required for various auxiliary systems i.e. frame lube oil, cylinder lubrication system, cooling water systems, fuel supply/conditioning system etc. In case divider block lubrication system, paper filter for frame oil & check valve in that circuit are also acceptable.	Please note that as per Manufacturer's standard practice the lubricator will be divider block type. Y type strainers, Sight flow indicators, check valve etc are applicable for Single Plunger per point lubricator, thus not applicable. This is our proprietary design and installed in almost 600 + CNG compressor all over india and are running successfully.	Noted
131		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 conditions shall prevail
132		23	4.7.2	Lubricators shall have a sight flow indicator for each lubricator point and a stainless steel Double ball check valve shall be provided at each lubrication point. Common sight flow indicator for Divider Block is also acceptable. Brass NRV shall also be acceptable.	Please note that as per Manufacturer's standard practice, the lubricator will be divider block type with pin indicators. Sight flow indicators for each lubricator point and a double ball check valve are applicable for Single Plunger per point lubricator, thus not offered.	Noted
133		23	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
134		25	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
135		26	4.12.6	The enclosures shall have doors for normal access and removable wall panels for ease of maintenance of all the components	The enclosure shall have hinged doors instead of removable panels. Please confirm your acceptance.	Noted

136		26	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 componies and we have supplied 600+ packages.	Noted
137		26	4.12.11	One vent line with double isolation valve shall be provided to emptying the package at 3rd stage separator.	Please note that as per our standard manufaturer practice,we have provided Single isolation valve instead of double isolation at each stage seperator drain	Tender Condition Prevails
138		42	12	One no. licensed software for compressor PLC	Request you to please confirm if the application software for PLC & HMI is required per compressor or along with complete set of compressors.	Bidder shall provide 1 set of licensed software along with relevant interfacing adaptors and cables in each city of GA where compressor package will be installed and commissioned
139		Specs-Flame Detector 119	1.12	Two year warranty against sensor and electronics for the supplied product	The warranty period will be 12 months from the date of commissioning or 18 months from the date of supply of compressor at site, whichever is earlier.	Tender Condition Prevails